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NOTES

ON

THE WESTERN STATES.

Joseph Cowperthwait

NOTES

ON

THE WESTERN STATES;

CONTAINING

DESCRIPTIVE SKETCHES

OF THEIR

SOIL, CLIMATE, RESOURCES AND SCENERY.

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BY JAMES HALL,

AUTHOR OF BORDER TALES, &c. &c.

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PREFACE.

We have no particular partiality for the task of writing a preface. It is a ceremony imposed by custom, and is in general as irksome to the writer, as it is useless to the reader of the work, to which it is appended. Publishers, however, have their own notions of what is proper, and in their apprehension the preface is a component part of a well gotten up book, and may not be dispensed with without a departure from a long standing and inflexible law of their profession. We hold a different faith, and are bold enough to avow our belief, that if there be an abuse in literature, demanding above all others, to be submitted to the process of immediate abolition, it is this one of forcing an author to supply his own book with a letter of introduction. For such, in practice, is most usually the substance of a preface. It is a brief history of the birth and parentage of the book, wherein it is expected that the author shall explain why it was written, and wherefore it has been published, with various other matters of no importance whatever in themselves, and of no interest to any except the party thus offending against good manners and correct taste.

The only valuable quality that we have ever been discerning enough to discover in a preface, is the opportunity which it affords to a modest author to herald the peculiar reluctance with which he does an act that is entirely voluntary on his part, and which he undertakes with the greatest apparent self-complacency. In these brief pages we read volumes of evidence in favour of the patriotism and benevolence of authors; and we cannot but honour a race so prolific in good offices, performed from the most amiable motives, yet attended with embarrassing circumstances of bashfulness and self-abasement. We gather from these candid fragments of literary history, that books are usually written merely to fill up a leisure hour, or to gratify the author's propensity for some favourite study, without the most distant intention of publication, and that they are only given to the public at the earnest solicitation of partial friends, or from an amiable desire to be useful to a world which is seldom grateful for the liberal self-sacrifices thus made. The man who in this manner gives to a thankless public the treasured gleanings of his secret hours of joy—the record of his private thoughts and studies—the unpremeditated out-pourings of his mind, or the choice reflections of his wisest and saddest moments—merely to gratify his friends, and to instruct the community, must be very philanthropic indeed.

Nor is this all. The history of books, as developed in prefaces, discloses further, that they are, for the most part, very hastily written, and full of imperfections, notwithstanding which the writers generously yield them up, with all their faults, submitting meekly to the blame of these, rather than withhold that which friends applaud and the public is eager to receive. We learn, too, from the same authentic source, that it is not vanity, ambition, nor the lust of gain, that induces the reluctant author to throw his bread upon the waters in the hope of finding it again after many days; that however contemptuous may be our opinion of a volume, none think so badly of it as the writer; and that none are so indifferent as to its fate, as he who gave it existence.—Like the bird of the desert, who buries her eggs in the sand, he abandons his precious manuscript to its fate, to be hatched by the parental care of the bookseller, and nurtured under the tender mercies of the critic.

But although prefaces, serve thus a valuable purpose in affording the earliest and most frank intelligence of the imperfections of books, and the disinterested philanthropy of authors, we adhere to the opinion we have expressed against them, because we apprehend that however acceptable may be the information they convey, it is such as would most usually be ascertained without them. The public might be safely left to infer the unambitious character of the author, from the contents of his work; and the partiality of friends, from the extent of the demand which may appear to have been made upon their charity.

There is one case, however, in which we consider a preface desirable and appropriate—a rare case, we admit, but one that occurs, whenever an author has any thing to say to the public about his book, which may be as properly said by himself as by another. Such is the predicament in which we are placed at this moment; and having written much for the gratification of others, we hope to be excused for occupying a few pages, with an explanation for our own particular benefit.

In the two volumes of "Sketches of History, Life, and Manners, in the West," recently published, the author attempted to illustrate the spirit and character of the history of this interesting region, by throwing together in a popular form, such materials relating to that subject, as were within his reach. These fragments, for such they may be properly called, were necessarily brief and unconnected, for some of the topics were new, and with regard to most of them, but little aid could be derived from books. Much of the work consisted of the traditions which the author had collected, and the observations he had made, during a residence of twenty years in the western country, during the greater part of which he has been engaged in pursuits which obliged him to travel much, and to associate intimately with the people. It was not intended, nor was it practicable, to give to such sketches the condensation of history, or the form of a continuous narrative; all that was attempted was an unconnected series of pictures, exemplifying the nature of the wants which characterized the settlement of the Western States, and the peculiar character of the adventures, the sufferings, the daring, and the intelligence of the pioneers. In this hasty outline, one of the objects of the author was, to place in bolder relief than any in which they had heretofore been presented, many facts which are highly honourable to the character of the western people, and to disprove the prejudiced and distorted charges of ignorance, brutality, and heathenism, which have been alleged against them.— A simple denial of the statements was not sufficient; it was necessary to adduce the evidence which should refute them, and accordingly a series of facts were presented, which show conclusively to any candid mind, that among those who have founded colonies or states on our continent, there have been none who have excelled the western pioneers in hardihood or generous courage, none have shown more forbearance or humanity, nor have any, in laying the foundations of civil government, observed with greater strictness the maxims of justice, morality, and order.

These facts have not been controverted, but the inferences drawn from them have given offence to some, who have been pleased, upon the authority of inferior evidence, to arrive at conclusions more in accordance with their preconceived notions, or local prejudices.

In the North American Review, No. XCII. the editor has condescended to notice the existence of the writer of these volumes, as we believe for the first time—for that work is so *very North* American, as seldom to bring within the scope of its criticism the literature of the more genial latitudes of our republic. When he deigns, therefore, to extend his vision beyond the charmed circle, which though somewhat small is supposed to comprise the concentrated effulgence of American genius, and favours the world with his notions of things in the distant and dark corners of the continent, it becomes us to listen with reverence to his opinions. In the West especially, buried as we are, in those clouds of ignorance of which we are so often reminded, we should not only be grateful for any notice bestowed on us from so high a source, but should diligently study, and respectfully learn, our own history and character, from such undoubted authority.

When we learned that our humble volumes had been noticed in the respectable pages of the North American, we could not but feel complimented, and it was with no small degree of admiration and awe that we read the following strictures:

"Judge Hall is not an accurate writer. In the work before us, (vol. 1, p. 247,) he informs us that Sir William Johnson purchased of the Six Nations, in 1768, their claim to the lands on the Northwest side of the Ohio to the Great Miami. This does not appear on the treaty. Page 251 represents two grants from the Cherokees to Henderson and his company; whereas it appears there was only one, the other being a grant to the crown in 1770. On page 31, (vol. 2,) he alters the date of the purchase of Louisiana from 1803 to 1795, probably confounding it with the Spanish treaty of 1795. On page 36, he comes to the conclusion that there was nothing treasonable in the Spanish conspiracy, on a dispassionate consideration of the whole matter. But in this dispassionate consideration he has wholly omitted the most treasonable features, saying nothing of the proposal made through Power in 1797, to withdraw from the Federal Union, and to form a government 'wholly unconnected with the Atlantic States;' nothing of the hundred thousand dollars offered as a bribe to bring this about; and nothing of the concealment of the whole matter by all concerned. All this looks a little treasonable. On page 119, he calls Kaskaskia a garrisoned town, when the fort was unoccupied, and the town defended only by militia; and on page 124, he tells us that the capture of Vincennes in 1779, led to the settlement of Louisville in 1778."

We copy this paragraph entire, as a remarkable specimen of the great amount of accurate historical knowledge, and critical acumen, which may be crowded into a small paragraph by the editor of the North American. Unfortunately, however, the paragraph is not original—as every allegation contained in it, is extracted from an article published in May last, in an obscure periodical called the Western Messenger, and signed by Mann Butler. Indeed the coincidence between these two articles in many respects is such, that it would not be difficult to prove from them a common origin, as conclusively as a New York writer proved Captain Basil Hall to be Mrs. Trollope. This coincidence is the more remarkable, as the editor of the North American, in the article in question, institutes a parallel between us and Mr. Butler, giving the preference to the latter, who, in his opinion, excels in "fairness, earnestness, and fidelity;" while Mr. Butler seems to entertain the same opinion of himself, and in his endeavours to convict us of error, complacently quotes his own book as authority. As they both therefore agree that Mr. Butler is an accurate historian, we ask the favour of them to read the following sentences:

The first is from the North American:

"Judge Hall is not an accurate writer. In the work before us he informs us that Sir William Johnson purchased of the Six Nations in 1768, their claim to the lands on the Northwest side of the Ohio to the Great Miami. This does not appear on the treaty."

The next is from Mann Butler's Review:

"Mr. Hall not only withholds all credit from others for reviving this ancient and important document of western history; but with the treaty under his eyes, mistakes its purport so much, as to represent it as ceding the country northwest of the Ohio, while not an acre northwest of that river was ceded by the Indians till the treaty of Fort McIntosh in 1785."

The third extract is from the "History" of the same Mann Butler, and is as follows:

"In 1781, Colonel Croghan who, for thirty years had been deputy superintendent among the Six Nations deposed, 'that these Indians claimed by right of conquest, all the lands on the southeast side of the Ohio, to the Cherokee river, and on *the west side, down to the Big Miami,* otherwise called Stony River.' *This title, as has been maintained, was alienated to the British crown in the treaty to which reference has just been had.*" History of Kentucky, p. 5 & 6.

The treaty here alluded to, is the treaty of Fort Stanwix, and in reference to the point at issue, we have on one side the assertions of the Editor of the North American, and Mr. Butler in his character of reviewer, and on the other myself, and the same Mr. Butler in his character of historian. There being therefore an equal weight of testimony on each side, our *inaccuracy* is not established; and we recommend that the editor of the North American cross examine his witnesses, or, what would be better, read the treaty.

The next charge in the North American, is as follows: "Page 251 represents two grants from the Cherokees to Henderson and his company; whereas it appears that there was only one, the other being a grant to the crown in 1770." Mr. Butler makes the same charge more at length. Had either of these gentlemen read the book carefully, which they undertake to condemn, they would have seen that we state (vol. 1, p. 246) that our account of these transactions was compiled "from the original papers of the gentlemen concerned"—they would have seen that the boundaries described in the two deeds, are distinctly and separately set forth—they would have seen further, (vol. 2, p. 272,) that in a memorial of Henderson and company to Congress they expressly state that "they the said company obtained from the said Indians *two several deeds*"—and if these asserters of our inaccuracy are still incredulous we will at any time they will call upon us, take great pleasure in showing them *the original deeds,* which are in our possession.

The next count in the indictment is this:

"On page 31, (vol. 2.) he alters the date of the purchase of Louisiana, from 1803 to 1795, probably confounding it with the Spanish treaty of 1795."

This charge is simply untrue. There is not a single date of any description on page 31, vol. 2, nor is the purchase of Louisiana stated, on that or any other page of the work, to have occurred in 1795. Had the editor of the North American written with the "Sketches" before him, he would not have fallen into this mistake, but having incautiously copied the same blundering original before alluded to, he has adopted the calumnies of another man, and made them his own by the reiteration.

The next charge is made more at length, and consists of several distinct misapprehensions and misstatements, so grossly inaccurate that it is difficult to conceive how any gentleman professing to be a critic could have ventured to place them upon paper.

"On page 36 he comes to the conclusion, that there was nothing treasonable in the Spanish conspiracy on a dispassionate consideration of 'the whole matter.' But in this dispassionate consideration he has wholly omitted the most treasonable features, saying nothing of the proposal made through Power in 1797, to withdraw from the Federal Union, and to form a government 'wholly unconnected with that of the Atlantic States;' nothing of the hundred thousand dollars offered to Sebastian as a bribe to bring about this; nothing of the concealment of the whole matter by all concerned. All this looks a little treasonable."

The above paragraph is a condensed paraphrase of more than a page of incomprehensible matter in Mr. Butler's review, and may be readily answered. We denied in substance that, relative to the matter alluded to, there was any treasonable conduct or intention, on the part of the people of Kentucky, or their leading men; while Mr. Butler, for the purpose of fixing the stain of treason upon some of the most conspicuous men of that State, enters into a long detail of *offers* that were *made them* by the *Spanish Governor of Louisiana.* He seems not to comprehend that his entire argument is a *non sequitur*, nor does the editor of the North American hesitate to adopt his sophisms. The proof that treasonable offers were made by one party, does not prove that another party, to whom they were made, were traitors. On the contrary, if the offer was not accepted, the inference is in favour of the innocence of the party declining them; and in this very case, after pertinaciously insisting that the Kentuckians were traitors, because the Spanish crown endeavoured to corrupt them, Mr. Butler clumsily defeats his own argument, by admitting that the offers of the Spanish, were "indignantly rejected" by some of the persons, while he does not show that they were accepted by any. But the strangest assertion is made by the North American, when he accuses us of saying "nothing of the concealment of the whole matter by all concerned." So far from there having been any concealment, all the circumstances attending these transactions were public, and the most of them were communicated by the persons attempted to be implicated, to the Legislature of Kentucky, and the President of the United States. In reference to the frankness with which these disclosures were made we remarked, at page 35, vol. 2, of the Sketches—"If these men were conspirators, they were the most frank, communicative, and honest men, that ever deserved that appellation; if they entertained designs hostile to the honour or the interests of their country, they certainly were singular in their choice of their confidants—members of Congress, and officers of the law themselves, their communications are addressed to the President, to a judge, and to the people!" Such is the evidence upon which the North American charges us with inaccuracy, and revives an obsolete calumny upon some of the purest patriots of our country.

There is one notion in the Review of the North American for which the writer of that article is entitled to full credit, as it is one of the very few remarks which he has ventured to make, without the authority of his confederate, the historian of Kentucky. We quote it at length:

"Judge Hall, in attempting to make out a theory which characterizes the intercourse of the Americans with the indians as habitually cruel and unfaithful, has brought an accusation against the Pilgrims of New England, so grossly inaccurate that we cannot let it pass unnoticed. After praising them for various qualities, he goes on to say, that, "the perversion of public opinion which could lead such men, themselves the victims of oppression, and the asserters of liberal principles, to treat *the savages as brutes*, must have been wide spread and deeply seated; yet such was certainly their conduct." The reviewer continues, "this charge filled us with surprise. We tried to recall the events in New England annals, which might justify such a sweeping assertion." We have no doubt that the surprise expressed is quite sincere, as we have had evidence enough that the reviewer's historical reading has not been very extensive; the difficulty therefore which he experienced in recalling the events to which we alluded is quite natural. He need not, however, have called spirits from the vasty deep, which would not come, by taxing his recollection—for had he turned to page 60, vol. 1, of the "Sketches," he would have found the instances quoted in which the founders of New England treated the savages as brutes. He would there have found extracts from the history of Connecticut by Trumbull, in which we are told of an instance in which thirty Indians, who were prisoners taken in battle, *were put to death*, while "the Pequot women and children who had been captivated, were divided among the troops. Some were carried to Connecticut, others to Massachusetts. The people of Massachusetts sent a number of the women and boys to the West Indies, *and sold them as slaves!*" Many more such instances could be quoted, but we have sufficiently shown, that we stated only the truth—for if the massacre of prisoners in cold blood, and the sale of women and children into slavery be not considered treating them as brutes, we need offer no other evidence.

But the whole of the last paragraph which we have quoted from the North American, is a disingenuous endeavour to deceive. We did not attempt "to make out a theory which characterizes the intercourse of the Americans with the Indians as habitually cruel and unfaithful"—on the contrary we showed conclusively that the Americans had been more just in their intercourse with the savages, than any other civilized nation, except the French, and the writer of that article has entirely misconceived our object, or deliberately misrepresented it. His confederate Mr. Butler objects to the same part of our book for another reason. In illustrating our subject we introduced some well known facts in history, relative to the dealings of the Spanish and Portuguese discoveries, with the American Indians and Africans; and Mr. Butler's comment is as follows: "The views of Mr. Hall on this part of his subject are not sufficiently enlightened by original and native authorities, and too full of political speculation to maintain any critical details." The objection in the first member of this sentence, when translated out of the writer's vernacular, which even his Boston ally admits to be rather homely, seems to be, that we should have ventured to state that Columbus discovered America, and that the Portuguese doubled the Cape of Good Hope, without giving *original* and *native* authorities, in the Spanish, Portuguese, Hottentot, and Indian tongues, to prove these very novel and hazardous propositions. We thought it sufficient to make some general reflections, in plain English, and to rely on the intelligence of our readers for all the corroboration the case required, and we certainly did not expect to be called upon to produce documents in four or five languages, to prove that the Indians and Africans suffered much unprovoked wrong. Mr. Butler however, with a more scholastic taste, and a devotion to philology resulting either from professional habits, or from his recent association with the North American critic, thinks our text would be vastly improved by a dash of the Mexican, Castilian, Malay, or perhaps a copious interlarding of any outlandish dialect which might be *original* and *native*. What he means by saying that the "Sketches" are "too full of *political* speculation to maintain any critical details," may perhaps be *guessed* at by his northern friends, but certainly is not very obvious. It would seem, that *political* speculation might as well be made the subject of criticism as any other; and it is a rather singular reason for an historian to give for avoiding a subject, that it is political. The political speculations of his own book may possibly set criticism at defiance; but this is no criterion by which to judge others.

The most amusing part of the criticism of Mr. Butler, we shall now place before our readers, as a curious specimen of the "*fairness* and *fidelity*" for which he is so much extolled by his Boston friend. He says, "Mr. Hall has availed himself of other men's labours, without any acknowledgment, in a manner which we can neither reconcile with justice nor generosity. Now it strikes us that when a man has brought to light new sources of information, either by the revival of forgotten documents, or by obtaining new facts; he should enjoy the credit due to labours for the public gratification with writers who have gathered the fruit of these labours. Such we consider the case with the descent of the Mississippi by the Taylors, 1769; the expedition of Capt. Thomas Bullit with the McAfees in 1773; the treaty of Fort Stanwix in 1768, and the establishment of a proprietary government in Kentucky in 1775. These facts are all used without any mention that they were not the result of the author's own inquiries."

We doubt very much whether many of our readers will sympathise with this complaint—for it will very generally be conceded that it was quite unnecessary for us to tell the public that "these *facts*" were not the result of our inquiries, for as *these facts* occurred before we were born, they could not have resulted from any of our doings.

The charge of our using Mr. Butler's labours, is too childish to require a reply, and we only notice it with other things, to show up in his proper colours the writer who is extolled by the North American as being "in the higher qualities of an historian" "above all praise." We have no doubt that Mr. Butler, in the simplicity of his heart, verily believes that he discovered the treaty of Fort Stanwix, and that it is very wrong in us to allude to it, without citing him as authority. How all knowledge of that memorable event came to be obliterated, we are not told, but we *are* informed how the historian of Kentucky made the marvellous discovery which has induced him to appropriate that event to himself, and the reader will read with admiration, that Mr. Butler "with great trouble and disappointment, traced this treaty from Dr. Franklin's memorial in his works!" and brought it to light,—yea, brought it out of the darkness of Dr. Franklin's obscure, into the marvellous light of the history of Kentucky! We are only surprised that he did not publish the whole of Dr. Franklin's works in his appendix, and thereby not only rescue them from the neglect into which he seems to think they have fallen, but become himself the happy proprietor of all that was written by that great philosopher. But much as we sympathise in the *trouble* which he was put to seeking, and the *disappointment* he met with in finding it, we hope we shall stand excused for having gathered what little we said about it from Marshall, Franklin, or some other of the numerous writers who had spoken of it, and for having forgotten to record that it was the same treaty that Mr.

Butler read about in Dr. Franklin's works and wrote about in the history of Kentucky.

As for the plagiarism complained of in reference to Bullit, Taylor, and the McAfees, my offence is comprised in four lines: "In the year 1773, Thomas Bullit, Hancock Taylor, and the McAfees engaged with ardour and success in the business of exploring and settling Kentucky, and became conspicuous individuals in the new community." This statement is not controverted, and if it be true that the gentlemen named were conspicuous men, we are not aware of any patent right which the historian of Kentucky could have for manufacturing their adventures into a book. All that we have said of them was printed by others, long before Mr. Butler became an author, and probably still longer before the editor of the North American commenced the study of western history.

The most singular claim of Mr. Butler, is that in regard to the proprietary government of Henderson and company. We expressly stated, at page 246, vol. 2. of the Sketches, that these facts were compiled "from the original papers of the gentleman concerned." Several of these papers are published entire in our appendix, and all of them remain in our possession. They furnish the only accurate account of the events alluded to, which had been published, and bear little resemblance to the statement of the same events given by Mr. Butler, who never saw the original papers, and had no knowledge of them except from our publication.

The queer notion of Mr. Butler, that all the facts which he is pleased to compile into his book, became thereby his individual property, even when they are confessedly taken by him from other writers, has a touch of oddity about it which does him credit, as it is certainly one of the very few original ideas that have dropt from his pen. Through his whole article he complains of the injustice we have done him, in writing on the same subjects upon which he has written—for that we ever copied any thing from him he does not pretend—and if *we had* taken the trouble of translating some of his crudities into the English language, we should be glad to know why we might not claim the credit of *bringing them to light*, upon the same principle that Mr. Butler claims the fragments which he has brought to light from the published writings of Franklin. It is singularly unfortunate however, for this charge of plagiarism, that the public are generally aware, that we were engaged in writing and publishing, on western subjects, about ten years before the History of Kentucky made its appearance, and the work entitled Sketches is made up of articles which had been separately published in periodicals, and which the author collected into the two volumes in question. The eastern critic might not have been aware of this fact—for we will do him the justice to admit, that he has given ample evidence of his innocence of any personal knowledge on the subject; but he has, in giving currency to the calumnies of Mr. Butler, done injustice to us, and practised a fraud upon the public.

We shall quote one more instance of the critical tact of our joint opponents, in which it will be seen, not only how keen they mutually are, upon the scent of an inaccurate statement, but how remarkably they coincide in sentiment. Had the same mind, or same want of mind dictated both articles, they could not be more identical in spirit.

Mr. Butler says, we "represent Kaskaskia as a garrisoned town," and as "fortified," vol. 2, page 119, and adds, "It is true there was a fort; but the only garrison that could be obtained for it was the militia of the village, who, at the attack by Col. Clarke, were snugly at their houses; and their governor, Mr. Rocheblave was in bed." The North American echoes "he calls Kaskaskia a garrisoned town, when the fort was unoccupied and the town defended only by militia." The facts here enumerated must certainly have been brought to light by the historian of Kentucky, and as he is a great stickler for the inviolability of his literary property, future writers should be careful how they infringe it. We are sure that no other historian ever found out, that a town at which "it is true there was a fort," was not *fortified*, or that a place was not garrisoned, because the "only garrison" was militia. The striking fact that the governor "was in bed," is entitled to great weight, yet we confess we have our doubts, whether in strictness, the individuals composing a military body, cease to be soldiers, whenever their commander puts on his night-cap, and whether the garrison, which was a garrison when Mr. Rocheblave was wide awake, became a garrison no longer, when that important personage sought the repose of the pillow. Butler in his *history*, at page 53, relates, that "the *fort* was taken; Clarke entered it by a postern gate left open on the river side, of the *fortification*"—but the same Mr. Butler turned critic, and commenting on our account of the same event, denies that place to be *fortified*, which he had himself admitted to have a *fort* and a *fortification;* and he speaks of Clark as entering the fort by a gate which was left open, and taking it, which was no very great exploit, if the fort was not fortified, and had no garrison. If there was neither armament, nor men, in the fort, we cannot conceive why Clark should assail it, or the accurate Mr. Butler describe the capture; and on the whole we adhere to our opinion, that a place which has a fort is fortified, and that a town protected by soldiers, even though they be militia, does not cease to be garrisoned when the governor goes to sleep. The truth is, the governor spoken of, was a military officer, and his authority, whether he watched or reposed, was strictly martial. In the French records preserved at Kaskaskia, he is styled *command-*

ant; the English apply the title *governor* to the commanding officer of a garrisoned town, and it was through an English translation that Mr. Butler possessed himself of the word as applied to M. Rocheblave—though he has not been careful to give us the original and native authorities.

We have deemed it a matter of proper self-defence, to expose the frivolity of the criticisms by which it has been attempted to destroy the reputation of the Sketches of the West; and to exhibit the singular collusion between our two assailants, who have each asserted the same charges, and with a remarkable fatality, have in every instance based their accusations upon misapprehension. Having thus refuted each of the several charges of inaccuracy brought against us by the North American, we have discharged a duty to ourselves, and to the subject; and we leave it to others to decide upon the correctness of the sweeping denunciation, pronounced by the Boston critic. Disguising his spleen under a jesuitical air of frankness, he remarks, "The work of Judge Hall is written in his usual easy and graceful style; it is calculated to interest readers who would not venture upon a regular history; without being very profound, it has an air of philosophy, well adapted to the parlour fireside; *without much accuracy,* it rambles over the whole ground, so as to satisfy an easy curiosity." Again, he says of us, "He professes to be a western man; the scene of his stories is generally in the west; his incidents are taken from western life; *but of western character he knows little, and of western spirit he possesses nothing.*" We have of course no reply to make to these assertions; they are the opinions of the critic, who has an undoubted right to think as he pleases, and to say what he thinks. Whether he is qualified to judge of western character and spirit is another question; we think we have already shown that he is grossly ignorant of the whole subject. The intelligent reader will however be not a little amused when we inform him, that after the critic had run through the catalogue of offences which we have quoted, he adds "these are small matters," and again "with these qualifying remarks we recommend the 'Sketches' to our readers as a work full of entertaining anecdote and description." What a clever critic! How much his readers must be obliged to him for recommending to them a work written *without much accuracy,* by one who *knows little* of his subject, and *possesses nothing of its spirit.* These however are, in his judgment, "small matters," and we have no doubt that he is sincere in the belief that to write well on a subject it is not necessary to understand it, or to treat it with accuracy, and that he has acted upon these principles in his own very recondite essay upon western history. "Judge Hall's book," says this remarkably acute critic, "might all have been composed by one who had never been beyond the atmosphere of London, but who had heard a few anecdotes, and read a few works about the western world." In the next sentence but one he speaks of Judge Hall's "well-earned fame;" and we are left at a loss to imagine how *a well-earned fame*, or any fame at all, could be acquired by one without knowledge, or accuracy, whose incidents are taken from western life, which he knows nothing about, and of which he could have written as well, had he "never been beyond the atmosphere of London"—unless we again resort to the conclusion that our critic fancies that "a well-earned fame" may be the offspring of ignorance and self conceit, and proposes to furnish in his own production a splendid instance of this species of illegitimate success.

To enable our western readers to judge of the degree of knowledge, as well as of candour, with which the North American has examined this subject, we shall make some further quotations, from which it will appear that we are not the only mark at which the reviewer discharges his envenomed shafts. In allusion to the Spanish conspiracy, he says: "From these facts, taken wholly from Mr. Butler, who is evidently disposed to shield the actors in them as far as possible from censure, it appears evident, that most of the leading men in Kentucky, through a long course of years, were in favour of separating from the union, and establishing an independent government, and took every measure in their power to bring this about."

So far from there being a word of truth in this statement, Mr. Butler's book affords no evidence "that most of the leading men in Kentucky" favoured the proposition alluded to. Even the bitter newspaper denunciations of the day, published in the heat of party warfare, and which have biased the decision of Mr. Butler, do not accuse but a few individuals; and so far from using "every measure in their power to bring this about," not a single measure of the kind was adopted. The question in relation to the right of the American people to navigate the Mississippi, was zealously argued in the newspapers, and at the conventions, and other public meetings of the Kentuckians, and the opinion was openly expressed, that if our government should not secure to the western citizens, a right so vitally necessary, they would be compelled, in self-defence, to erect a separate government. From such expressions—used in the heat of an animated discussion, the reviewer infers that *measures were taken* to bring a separation. In speaking of the French intrigue, he remarks "Here again we see distinguished citizens of Kentucky, such men as Shelby and Clark, underrating or overlooking the duties which they owed the Federal government, in a mad sympathy with French republicanism. Mr. Butler attempts to defend governor Shelby for the course taken by him in this matter, and Judge Hall passes it over with his usual easy negligence." This paragraph is just as "inaccurate," as all others we have quoted, and shows with how little care the reviewer had read the history of a people whose leading men he calumniates. General Clark proposed to do, precisely what General Houston, Mr. Burnet, and other Americans are now doing, with the approbation of a large portion of the American people. He proposed to wrest from the Spaniards, a portion of their North American possessions, by means of an army to be raised in the western states. Governor Shelby was called upon to arrest the expedition, and hesitated because he was doubtful whether he had any power under the constitution of Kentucky, to prevent the citizens of that state from emigrating with arms in their hands. A similar case has occurred in our times, and we ask, what governor has arrested the volunteers who have passed through our country on their way to Texas?—Troops have been publicly enlisted, public meetings have been held, banners have been presented; while almost simultaneously the Texan revolt has been spoken of with approbation on the floor of Congress. If no duty to the Federal Government has been violated in this case, none was violated by General Clark; the scruple of Shelby was justifiable, and the eminent services of these revolutionary heroes might have protected their memories from the supercilious sneer of the reviewer, as well as from the jesuitical defence of the historian of Kentucky, who has the singular art of calumniating those whom he affects to applaud.

It is however not surprising that the reviewer who could venture an excuse for Hull, who had surrendered a gallant army, without striking a blow, to an inferior force, under circumstances which conclusively show that either treason or the most abject cowardice was the impelling motive of the disgraceful act—should feel but little sympathy for the reputation of such men as Clark and Shelby. Where he learned that the defence published by Hull "caused a decided change of opinion through a great part of the union," we are unable to decide, unless it was in some such work as the admirable History of Kentucky, wherein he read of the "syren song of peace and farming," which was so artfully sung by Col. Burr.

In further evidence of the "accuracy" of our reviewer, and his knowledge of western character, we quote the following remarks, wherein he sets forth his opinion of the Kentuckians: "For fear of using Puritanical restraints, the child is left to go his own way to destruction. Mothers encourage their children to fight with their companions, and praise their passion or anger. The death of those children, shot or stabbed in some wild fray, is too often the terrible result of such early lessons.—Young ladies lavish their favour and approbation on the chivalric, and give their smiles to the lawless reprobate who glories in the murders he has committed on the field of honour." All this is deliberately set down, as the sober truth, in the North American Review, a periodical of the highest class, purporting to be conducted under the auspices of gentlemen and scholars, who are not sparing of their indignation when similar remarks are made by English tourists. They give out these sentiments without qualification as applicable to a whole people—a people as generous, as virtuous, as moral, as respectable, as those of any other state in the union. The statement is not, that *some* children are left to go their own way to destruction, but that all are alike abandoned to vice,—not that *some* mothers encourage their children to fight, but that such is the admonition of the Kentucky matron—not that *some* young ladies prefer a reprobate whose hand is stained with blood, but that it is the taste of the Kentucky maiden to lavish her smiles on the murderer. We would ask the reviewer how he would like to see the besetting sins of a portion of the population of his own state set down as characteristic of the whole people? Suppose some one should write of them—the child is brought up in the love of money, and hatred of Roman Catholics. Mothers encourage their children to counterfeit bank notes, to fabricate bad shoes and leaky tin vessels, and to manufacture ingenious wooden imitations of nutmegs. The discipline of the penitentiary, or the Lynching of these children in southern latitudes, is too often the terrible result of such early lessons. Young ladies lavish their smiles on the lawless reprobate who glories in having assisted at the tearing down of a convent. Their chivalry is displayed in making war upon women, *and their religion in coveting the man servant and maid servant of their neighbour*. We do not say that one word of this would be true of the people of Massachusetts—but we do assert without the fear of contradiction, by any candid man, that it would be just as true as the reviewer's character of the Kentuckians.

But we are not yet done with our reviewer. His gall is concentrated at the sequel of his article, like the drop of poison upon the sting of the venomous insect, and he sums up his opinion of *western character* after the following fashion: "Religious restraint is needed, moral principle is needed, wise guidance is needed. A deep reverence for truth, a profound respect for law, a ready submission to right, a loyal allegiance to duty, these will make the western character as perfect as humanity can ever hope to become."

If this is intended merely as one of those Yankee flourishes, written to make the village gossips roll up the whites of their eyes and exclaim "do tell!" "why how you talk!"—it may pass. If it is one of those "awful disclosures," which are put forth to pioneer the way for Boston school books, and schoolmasters, and agents, it may go for what it is worth. But if the editor of the North American takes upon himself the responsibility of asserting with critical "accuracy," that *western character* is deficient in *religious restraint, moral principle, reverence for truth, respect for law, submission to right,* and *allegiance to duty,* we have only to say, that he is not the man we took him for—his lack of information on the subject upon which he has chosen to write for the edification of his readers, is a venial defect compared with the want of politeness, charity, and common sense, evinced in the composition of such a paragraph.

With regard to the work now offered to the public, we have only to remark, that like its predecessor, it consists of sketches illustrative of western subjects. The greater portion of them have already been published in periodical works. The article on the Public Domain, appeared in the American Quarterly Review, and that in relation to the Western Prairies, was written for the Illinois Monthly Magazine. We are thus particular, because several years have elapsed since a portion of this matter was first published, and a good deal of it may have been "brought to light" in the compilations that have since been made up, by persons who might be disposed to dispute the paternity of our offspring, if we did not thus specially identify it.

Since the publication of the foregoing remarks in the first edition of this work, another article has appeared in the North American, in which the editor, though evidently disconcerted by our exposure of his gross mistakes—to give them no harsher name—has not had the liberality to correct them. We had supposed it possible, that the blundering criticism in question had been imposed upon him by some weak-minded person, who had a private pique to gratify or a petty interest to advance, and that on being convinced of the manifold inaccuracies of that very puerile and stupid production, he would have taken pleasure in disowning it. The editor, however, deliberately persists in giving circulation to the reputed calumnies, and leaves me no alternative, but that of reiterating the exposure of his unprovoked and discreditable attack.

We cheerfully admit that, if we had, in the volumes in question, and other of our works, availed ourselves of "other men's labours" to a greater extent than has been our practice, those works might have been much more worthy of public approbation; and a seasoning of "original and native authorities," might have earned us a reputation for scholarship, to which we have never aspired. But such was not our plan; and if any meaning at all can be extracted from the misty grumblings of Butler, and the puerile jeers of the North American, our offence seems to be, in their eyes, that of not compiling a history, from existing publications, instead of writing sketches from observation and memory.

Having spent many years in the Western States, engaged in active business—in travelling extensively—in mingling intimately with the people—we proposed to do little more than record the results of our own experience, and of the information gathered personally from the inhabitants; and we confess that while we were startled, on the one hand, by the call for *original and native au-*

thorities, we were not less surprised on the other, at the sweeping charge of *knowing little of Western character, and possessing nothing of Western spirit*. Nor was that surprise lessened by the evidence adduced by the critic to sustain his assertions: for when he attempts to specify the *inaccuracies* that indicate the alleged ignorance of western character, and deficiency of western spirit, what do they amount to? A few dates, it seems, are supposed to have been misstated—an obsolete treaty is thought to have been misquoted—a stale electioneering calumny has been repudiated—and what then? Suppose we admit the supposed errors—has the critic made out his case? Has he proved that our books "might all have been compiled by one who had never been beyond the atmosphere of London?" Alas! what ills await the critic who, abandoning the safe obscure of a vague generality, ventures in to the dangerous daylight of a specification! Any man may write another down *an ass*, but he who would prove such a charge, must make his evidence conform to his declaration. We are accused of *entire ignorance, utter destitution of the spirit of our subject*, and writing, professedly upon *personal knowledge*, books that could as well have been written by one who *had not seen the country, nor witnessed any of the facts*, purporting to be described—and the evidence shows up a few inaccuracies, which the editor himself calls "*small matters!*" Small matters indeed! the charges involve ignorance and knavery; the evidence only purports to show the most venial mistakes! Knavery may be a small matter in the region of the North American, but in the more generous latitude in which we learned our morality, the writing of a book professedly from personal knowledge, on a subject of which the author was wholly ignorant, would be considered a serious offence. We are aware that in some other parts of our continent, people are less squeamish, and the code of ethics not so rigid.—So far, however, from sustaining his grave charges, the errors attributed to us, are precisely those to which a native of the country would have been as liable as a foreigner, for they relate to times long past, and to events beyond the personal knowledge of the writer. They are among the very few fragments of this work which have been gleaned from books, but which prove nothing in relation to the author's knowledge of western character, or possession of western spirit. Even these alleged mistakes, we have proved to be unjustly charged to us; while no attempt has been made to refute a statement or expose a fallacy, in the far greater portions of our several works, in which are contained the writer's own views and opinions.

THE WESTERN PLAIN.

CHAPTER I.

The Western Plain—Its Limits—Its Topography—The General Character of its Formation—Its Mineral Resources.

In order to understand the subject distinctly, it will be necessary to consider carefully the topography of that part of the valley of the Mississippi embraced within our remarks, with a few of its geological features. It extends from the western slope of the Allegheny mountains, to the great sand plains of the west, a distance of about fifteen hundred miles; and from the northern lakes to the mouth of the Ohio, a distance of about six hundred miles.

We confine ourselves chiefly within these limits, because they circumscribe a territory naturally connected, by similarity of climate, and contiguity of territory. It is properly *the West*, the seat of what is called the Western population, and the most valuable tract of country in the United States. It embraces the states of Kentucky, Ohio, Indiana, Illinois, Missouri, the territory of Michigan, and parts of Virginia, Pennsylvania, and Tennessee, and a region of about five hundred miles in width lying west of those organised boundaries. There is probably not on the globe, an equal expanse of surface, of such uniform fertility; and when in addition to that advantage, we take into view, its temperate climate, its salubrity, the abundance of its mineral resources, the variety of its productions, the multiplicity and extent of its navigable communications, and its central position in relation to our continent, it will be conceded that there is none which better deserves to be described and studied.

The term *valley*—the valley of the Mississippi—which is popularly applied to this region, does not express its real character, as it is in fact a plain, one of the most remarkable features of which, is the great extent of level surface embraced within its area; for although undulations, and even hills, sometimes swell before the eye of the traveler, the general plane is almost invariable. The difference in elevation over its whole surface—leaving out of view a few unimportant local inequalities—is only a few feet. There is, however, a gradual declination from the north east, towards the southwest. This will become obvious from an examination of the annexed table, compiled by Colonel Long, and founded on actual observations had in his expedition to the sources of the St. Peter river.

A table shewing the probable altitudes, in feet, of the water level, at a variety of points therein specified, above tide water.

Points Indicated.	*Elevation.*
Mouth of the Ohio River	300
Ohio River at Cincinnati	414
Do. at the mouth of Sciota River	464
Do. at the mouth of Muskingum River	541
Surface of Lake Erie; River des Plaines 20 miles above its mouth; Mississippi at the head of the rapids Des Moines; and the Ohio, a few miles below Wheeling, Va.	565
Lakes Huron and Michigan	571
Lake Superior	595
The Ohio at Pittsburgh; the Mississippi at St. Peters; and the Missouri at the mouth of the River La Platte	680
Sources of the St. Peter and Red Rivers	830
Source of the Muskingum	902
Source of Big Beaver	907
Source of the Sciota	919
Source of the Miami	964
Lake of the Woods	1040
Rainy Lake	1100

Points Indicated.	*Elevation.*
Sources of the streams on the route of the Expedition, tributary to lakes Winnepeck and Superior; and head waters of the Mississippi - - -	1200
Dog Lake - - - - - - - - -	1000
Lake Winnepeck - - - - - - - -	630

These elevations may be relied upon, as possessing all the accuracy desirable for the purpose of topographical description, having been derived from sources entitled to the highest credit. They have reference to the water surface, and shew, that from Pittsburgh, the Ohio river has a descent of less than four hundred feet, to its mouth,—a distance, by its meanders, of eleven hundred miles; and that from the sources of the Mississippi to the same point, the descent is only about seven hundred feet. The surface of the plain itself approaches still nearer to an actual level. Its north east corner near Pittsburgh, lies about seven hundred feet above the tides; the plains of Kentucky and West-Tennessee are about the same height, and as we proceed westwardly up the Missouri or Arkansas, we reach similar elevations. These are the exterior limits of the plain which descends as well from the Rocky Mountains, as from the Alleghenies, towards the Mississippi.

"The great and numerous rivers that cross this plain," says an acute writer in the American Quarterly Review, "instead of forming distinct valleys, do but indent narrow lines or grooves into its surface, barely sufficient to contain their floods. These river channels, as the current rolls on, must form a declivity, and towards the lower parts of their courses sink deep into the plain; hence the large rivers, Ohio, Missouri and others, seem bordered with abrupt hills of several hundred feet elevation; but the tops of these hills are the level of the great plain, and are formed by smaller streams which fall into those large rivers, where their channels are thus worn down; and to give themselves an easy slope, these streams must wear down, in a corresponding manner the neighboring parts of the plain; and presenting abrupt points between them, shew the appearance of river hills." We give the language of another, in this instance, rather than our own, that our views may be corroborated by those of other persons.

When we take into view the level surface, its uniformity of conformation, and the fact that it rests on a continuous *stratum* of rock, which is found to preserve its horizontal position with remarkable regularity, it is not surprising that comparatively few water courses take their rise within the more central parts of its limits, and that the subterranean currents, which are abundant, seldom rise to the surface, but find vent upon the margins of streams, where the valley has been washed down to their level. Rich as our country is in noble rivers, almost all of those of superior magnitude take their rise in the distant mountains, and receive comparatively but little tribute from the wide regions through which they roll; and thus the great streams, which in the spring of the year, when swelled by heavy rains, and by the melting snows of the mountains, fill their banks to overflowing, become exhausted in the summer and autumn, by undergoing in their long meandering courses, the impoverishing processes of evaporation and absorption, while they receive but little accession from their tributaries. The Ohio, Missouri, Cumberland, Tennessee, Arkansas, Red River, and all the great rivers of Tennessee and Kentucky, take their rise in the mountains, and the Mississippi flows from a region beyond the limits of our plain; the Illinois, Wabash, Sciota, Muskingum, Miami, and others of secondary importance, originate in the interior of the plain, and afford but little water during the dry part of the season.

The formation of this plain, as the reader will have already discovered, is secondary. It rests upon a horizontal limestone pan, of such depth that its thick *strata* have never been pierced through, although the auger has penetrated into it in search of salt water, in many places, from four to six hundred feet. The rock lies but a few feet below the surface, and supports throughout its whole extent, strata of bituminous coal, and saline impregnations. To the decomposition of this limestone may be attributed, in part, the fertility of the soil, while its absorbent and cavernous nature, prevents the accumulation of swamps and standing pools, and renders the whole plain dry and salubrious, in a remarkable degree. The most striking indications of the cavernous character of the limestone, are to be seen in Kentucky and Tennessee, where gigantic caves extend their varied and gloomy ramifications, throughout the whole of the *substrata* of widely extended districts. The curious have explored some of these cavities for many miles, and spent successive days, in examining their winding passages, and prodigious chambers, without being able to discover their utmost limits. The same singular configuration of the limestone is inferred, in other places, in nearly all the western states, by the existence of curious depressions of the earth, popularly called *sink holes*, which are deep funnel shaped cavities, sinking abruptly from the surface of the soil, and extending down to that of the rock, and which are doubtless caused by the dropping of the earthy particles, through some fissure of the limestone. These holes are often found in large groupes, when they present a most singular appearance. They are usually dry; but instances occur, where the outlet at the bottom having become choked by some impervious substance, the rain water accumulates, and remains unexhausted throughout the year.

In the year 1811, a series of earthquakes continued for a few months, to shake the whole southern portion of this immense district. The region of Kentucky south of Green river, and southern parts of Illinois and Missouri, formed the chief scenes of this alarming phenomenon, the vibrations of which were however felt in a slight degree in the higher latitudes of the plain. The shocks were sufficiently severe to prostrate chimnies, and to cause the timbers of log and framed houses to be shaken, and even separated. At New Madrid on the Mississippi, the earth yawned, and the inhabitants were driven from their homes; and at one point in that vicinity, so large a quantity of water is said to have been engulphed in a chasm beneath the bed of the river, that this mighty river ceased for a moment to roll its waters towards the ocean. The latter statement, however, must be received with caution, as it rests solely upon the hasty observations of a few panic stricken voyagers, through an almost uninhabited region. The terror caused by this visitation was very great, and it still continues to be a prominent subject in the traditions of that part of the country. But there is not the slightest reason for believing in the existence of any permanent causes, which would render this plain liable to such occurrences. In the twenty-four years which have subsequently elapsed, the alarm has not been repeated; while the uniformity of the surface of this country, and the remarkable absence of the appearances that indicate the disruption of the strata, shew that such events had not occurred in earlier times.

The first settlers, and the earliest travelers, spoke of hurricanes of vast extent and tremendous power, as among the peculiar phenomena of this plain; but their statements have not been confirmed by experience. Those who travel over uninhabited countries, or reside in temporary dwellings in the wilderness, are exposed in a greater degree than ordinary, to the accidents of the seasons, and are apt to magnify those usual occurrences, which might have passed unobserved under other circumstances, when less personal inconvenience or danger would have resulted from them. The diversities of temper, and of physical organisation, are so numerous, that we should receive with great distrust, any observations upon climate, detailed by persons who are exposed to its action for a season, and who neither make deliberate scientific experiments, nor report a series of facts, carefully recorded.

The same course of reasoning may be applied to the alledged variability, and the reputed unhealthiness, of our climate. Facts of such grave importance should not be considered as settled, by that common rumor, whose want of veracity is so notorious. The results of patient and careful investigation, by competent men of science, will hereafter decide these points, and will, in our opinion, shew that the current reports in relation to these matters, have been in direct opposition to the truth.

When we speak of the present advantages, and future greatness, of the West, it is proper that we should discriminate, so as not to deceive those who have not the means of judging for themselves. The climate differs but little from that of corresponding parallels of latitude, in the United States. So far as health is concerned, we suppose the advantage to lie on our side of the mountains, while in reference to vegetation, there is no observable difference.

Neither is there any supernatural fertility in our soil, which yields its rich returns only under the operation of careful and laborious tillage. It is the great breadth and continuity of our fertile surface, which gives to the West its superior advantages. It is the accumulation within one wide and connected plain, of the most vast resources of agricultural and commercial wealth; and the facilities afforded by our country, for concentrating and using an unlimited amount of wealth, and bringing into combined action the energies of millions of industrious human beings, on which are based the broad foundations of our greatness.

With the breadth of an empire, we have all the facilities for intercourse and trade, which could be enjoyed within more limited boundaries. Our natural wealth is not weakened by extension, nor our vigor impaired by division. The riches of soil, timber, and minerals, are so diffused as to be every where abundant; and the communication between distant points is so easy as to render the whole available. The products of the industry of millions may be here interchanged with unparalleled ease and rapidity; and when our broad lands shall be settled, there will be a community of interest, and an intimacy of intercourse, between myriads of men, such as were never before brought under the operation of a common system of social and civil ties.

The mineral resources are abundant. The coal, which is pure and excellent, spreads throughout the whole region, and is in most places easily accessible. Iron ore abounds generally: especially in Pennsylvania, Tennessee and Missouri, and the best ore is said to yield seventy-five per cent. of fine malleable iron. At Pittsburgh and Cincinnati, but particularly at the former place, this metal is wrought into a great variety of manufactures. The lead districts of Illinois and Missouri, would cover two hundred miles square, and form undoubtedly the richest region of that metal which has been discovered on any part of the globe. The French resorted to these mines many years ago, but it is only recently that their extent and value have been made known; yet something like twenty millions of pounds of lead have been smelted at them, in the course of one year, and there is no question of their capacity to afford a permanent supply of that useful metal to the whole civilized world. The cavernous region of Kentucky has been found to be strongly impregnated with salt-petre, of which vast quantities have been made and exported. Copper has long had a traditionary existence, in the neighborhood of the north western lakes. The ore has been found in small quantities in different places, and at one spot a solid mass weighing several tons, of remarkable purity, has attracted the attention of the curious; but all attempts to discover a sufficient body of the mineral, to render the manufacture productive, have failed. Salt is an important article of manufacture. Saline springs are distributed throughout the whole region, some of which are copious and strongly impregnated. On an average, one hundred and twenty gallons of the water will make sixty pounds of salt, but it is much stronger in some places than at others. Of the mineral waters the chalybeate is most frequently found, impregnations of pure sulphur are common; those of copperas, alum, and sulphate of magnesia, are occasionally met with.

In treating the subjects under consideration more in detail, we shall be under the necessity of dividing the region under consideration into two separate districts, and to speak occasionally of the valley of the Ohio, and that of the Mississippi; for although the whole forms, in fact, one great, and remarkably uniform plain, there are yet some striking peculiarities which distinguish each of these rivers, as well as the lands lying upon their margins. Of these peculiarities I propose to treat under the several heads into which this work will be divided.

CHAPTER II.

The River Ohio.

It may be well to commence our rapid sketch of this river, with an attempt to explain the etymology of its name. We shall, however, do no more than present the views of messrs. Duponceau and Heckewelder,—two gentlemen who have bestowed great attention upon the aboriginal languages of our country,—as expressed in a paper in the Transactions of the American Philosophical Society.

From this communication, it appears evident, that the idea, which has prevailed to some extent, that the word Ohio is derived from the Iroquois language, is not correct. It has been said, that the Iroquois Indians called the Ohio the *fine* or *beautiful* and sometimes the *bloody* river. Mr. Duponceau examined the vocabularies of that language, for the words corresponding with these terms, and became satisfied that the word Ohio was not derived from them. Farther examination, satisfied his mind that the position taken by Mr. Heckewelder, is correct, which is, that the term Ohio is derived from a word or words in the Delaware language, which mean the *white* or the *white foaming river*.

Mr. Heckewelder expresses the opinion that the four letters composing the word *Ohio* do not comprise the whole of the Indian name. His reasons are the following:

1st, That the names given by the Indians to rivers, are invariably descriptive either of those streams or something about them.

2nd, That he had never heard the Indians call this river by the name of Ohio.

3d, Because the French and English, in using Indian names, are accustomed to drop a part of them, to render the pronunciation easy.

Mr. Heckewelder then gives a list of words from which he argues that this name has been derived; some of which, with their meaning in the English language, are here quoted.

O'hui—Ohi, very.
O'peu, white.
Opelechen, bright, shining.
Opeek, white with froth.
Ohíopéchen, it is of a white color.

Ohiopeek, very white, (caused by froth or white caps.)

Ohiophanne, very white stream.

Ohiopeekhanne, very deep and white stream, (by its being covered over with white caps.)

Ohiopehhele, which signifies white frothy water.

Mr. Heckewelder then adds, "The Ohio river being in many places wide and deep, and so gentle, that for many miles, in some places, no current is perceivable: the least wind, blowing up the river, covers the surface with what the people of that country call *white caps;* and I have myself, for days together, witnessed that this has been the case, caused by southwardly and south-westwardly winds, so that we, navigating the canoes, durst not venture to proceed, as these *white caps* would have filled and sunk our canoe in a minute. Now in all such cases, when the river could not be navigated by canoes, nor even crossed with this kind of craft—when the whole surface of the water presented white foaming swells, the Indians would, as the case was at the time, apply one or other of the above quoted words to the state of the river; they would say 'juh Ohiopicchen,' 'Ohiopeek ohiopeekhanne;' and when they supposed the water very deep, they would say, 'Kitschi ohiopeekhanne,' which means, 'verily this is a deep white river.'

Again recurring to the habit of abbreviating Indian words, so generally prevalent among the French and Americans, Mr. Heckewelder concludes his interesting remarks upon this subject, with the supposition that at an early day, the emigrants to the west, took the first syllable of the Indian name 'Ohiopekhanne,' because both easy to pronounce and to keep in the memory.

The river Ohio, for some distance below Pittsburgh is rapid, and the navigation interrupted in low water by chains of rock extending across the bed of the river. The scenery is eminently beautiful, though deficient in grandeur, and exhibiting great sameness. The hills, two or three hundred feet in height, approach the river, and confine it closely on either side. Their tops have usually a rounded and graceful form, and are covered with the verdure of an almost unbroken forest. Sometimes the forest trees are so thinly scattered as to afford glimpses of the soil, with here and there a mass, or a perpendicular precipice, of grey sandstone, or compact limestone, the prevailing rocks of this region. The hills are usually covered on all sides with a soil, which though not deep, is rich.

Approaching towards Cincinnati, the scenery becomes still more monotonous. The hills recede from the river and are less elevated. The bottom lands begin to spread out from the margin of the water. Heavy forests cover the banks, and limit the prospect. But the woodland is arrayed in a splendor of beauty, which renders it the chief object of attraction. Nothing can be more beautiful, than the first appearance of the vegetation in the spring, when the woods are seen rapidly discarding the dark and dusky habiliments of winter, and assuming their vernal robes. The gum tree is clad in the richest green; the dogwood and red-bud are laden with flowers of the purest white and deepest scarlet; the buckeye bends under the weight of its exuberant blossoms. The oak, the elm, the walnut, the sycamore, the beech, the hickory, and the maple, which here tower to a great height, have yielded to the sunbeams, and display their bursting buds, and expanding flowers. The tulip tree waves its long branches, and its yellow flowers high in the air. The wild rose, the sweet-briar, and the vine, are shooting into verdure; and clinging to their sturdy neighbors, modestly prefer their claims to admiration, while they afford delightful promise of fruit and fragrance.

The scenery still exhibits the same appearance, as we continue to descend the river, except that the hills gradually become less bold and rocky. The shores of the

Ohio do not any where present that savage grandeur, which often characterises our larger streams. No tall cliffs, no bare peaks, nor sterile mountains, impress a sentiment of dreariness on the mind. The hills are high, but gracefully curved, and every where clothed with verdure. There is a loneliness arising from the absence of population, a wildness in the variegated hues of the forest, and in the notes of the feathered tribes; but the traveler feels none of that depression which results from a consciousness of entire insulation from his species, none of that awe which is inspired by those terrific outlines that display the convulsions of nature or threaten the existence of the beholder. It is impossible to gaze on the fertile hills and rich bottoms that extend on either side, without fancying them peopled; and even where no signs of population appear, the imagination is continually reaching forward to the period when these luxuriant spots shall maintain their millions.

The absence of population alluded to, is to be considered in a comparative sense. With Ohio, Indiana and Illinois on the one hand, and Kentucky and Virginia on the other, there can be no dearth of inhabitants; but their dwellings are less frequently presented to the traveler's eye than might be supposed. We continually pass villages, great or small, and farm houses are scattered along the shore; but we often float for miles without discovering any indication of the residence of human beings. Many of the river bottoms are inundated annually, and land has not yet become so scarce or valuable as to induce the owners to reclaim these spots from the dominion of the water. Such places remain covered with gigantic timber, which conceals the habitations beyond them. The commanding eminences are seldom occupied, because the settlers are farmers, who consult convenience, rather than beauty, in the location of their dwellings, and who generally pitch their tents in the vicinity of a spring, upon the low grounds.

One peculiarity, which is common to this river and the Mississippi, and is perhaps owing as well to their great volume of water, as to the nature of the secondary formation through which they roll, is the rounded and graceful shape of their meanders. The noble stream, clear, smooth, and unruffled, sweeps onward with regular majestic force. Continually changing its direction, as it flows from vale to vale, it always winds with dignity, and avoiding those acute angles which are observable in less powerful streams, sweeps round in graceful bends. The word *bend* is very significantly applied, in the popular phraseology of this region, to express these curvatures of the river.

The beautiful islands, which are numerous, should not be forgotten. These are sometimes large and fertile, but generally subject to inundation, and seldom under tillage. Sometimes they are mere sandbanks, covered with thick groves of the melancholy willow, whose branches dip into the water. The term *tow-head*, is significantly applied to the latter, by the boatmen.

Below the Falls of Ohio, we find a country, not essentially different from that above, but presenting a different appearance to the eye, as viewed from the river. The change has been so gradual, that the traveler only now begins to realise a diversity of surface, soil, and climate The country is flat, the soil is deep, black, and rich. Small ranges of hills are seen at intervals ; but the rock foundation is seldom exposed to the eye. The river-bottoms become more extensive, exhibit decided appearances of annual inundation, and are intersected by *bayoux*, or deep inlets, which are channels for the water in time of flood, and remain empty during the rest of the year. *Cane-brakes* are occasionally seen along the banks. The cane is an evergreen, from twelve to twenty feet in height, which grows chiefly in rich flats. It stands so thick upon the ground, as to form an almost impenetrable thicket, and as it is usually, in this region, found among ponds and *bayoux*, the *cane-brake* is always a secure retreat for *bears*, which feed upon the buds, and for deer and other gregarious animals. The first settlers find them very valuable, as affording food for their cattle during the winter; and even after the country has been many years settled, the inhabitants drive their cattle *to the cane* in the autumn, and suffer them to remain without any further attention until the ensuing spring. The cane, however, is generally destroyed in a few years, by the large number of cattle which are thus wintered upon it. Cattle and horses eat it greedily, and will stray several miles in search of this favorite food, which is said to be very nourishing.

Cotton-wood, peccans, catalpas, and gigantic sycamores, are now seen in the rich bottoms. Extensive groves of cotton-wood sometimes clothe the shores of the river. The tree is large, and extremely tall; the foliage of a rich deep green, resembling that of the *Lombardy poplar*, to which tree this also assimilates somewhat in shape. Nothing can exceed the beauty of these groves: at a distance, a stranger might imagine them forests of Lombardy poplar; and as that tree is devoted to ornamental purposes, it is scarcely possible to refrain from fancying, that some splendid mansion is concealed in the impervious shade; while the deep gloom with which they envelop the soil, gives a wild, pensive, and solemn character, to the *cotton tree grove*.

The catalpa is a small graceful tree, remarkable for the beauty of its flowers. The peccan is a tall tree, resembling the hickory, to which it is nearly related; it yields a rich, fine nut, of which large quantities are annually exported. It is found on the margin of the Ohio and Wabash for a short distance above and below the junction of those rivers, and within the corresponding parallel on the Mississippi, but not elsewhere in this region. Grape-vines are numerous and very large, the stems being sometimes nearly a foot in thickness, though seldom exceeding six or eight inches, and the branches extending to the tops of the tallest trees.

The misletoe is seen hanging from the branches of the trees throughout the whole course of the Ohio. It becomes more abundant after passing Cincinnati, and is seen in the greatest profusion between Louisville and the mouth of the river. This little plant never grows upon the ground, but with a very poetic taste, takes up its attic residence upon the limbs of the tallest trees. The berry which contains the seed, is so viscous as to adhere to the feet of birds, who carry it from tree to tree, and thus contribute to the propagation of this ornamental parasite.

The paroquet is now seldom seen north of Cincinnati. They are abundant below Louisville, where flocks of them are heard chattering in the woods, or beheld sporting their bright green plumage in the sunbeams.

One of the most remarkable characteristics of this, and other western rivers, is the vast and rapid accumulation in the volume of water which takes place, usually in the spring, but occasionally at other seasons, and is caused by the immense extent of the territory drained.

When the waters are low, as is commonly the case, in the dry seasons of the summer and autumn, the majestic Ohio dwindles to a small stream, affording but limited facilities for navigation. Among the hills of Pennsylvania and Virginia, it is seen rippling over chains of rock, through which a passage is barely afforded to boats of the lightest burthen. Further down, its channel is but rarely obstructed by ledges of rock; but instead of these, a series of sandbars, extending in some places from shore to shore, and in others projecting from the margin of the river far into its bed, and covered by but a few inches of water, render the navigation almost impracticable. Steam boats constructed for the purpose, and navigated by skillful pilots, ply with difficulty from port to port. Many are grounded upon the bars, from which perilous situation some are relieved with great labor, while others are obliged to remain exposed to the elements, during the rest of the season, and are either lost, or seriously injured. The larger boats are wholly useless during this part of the year; and of the hundreds of noble vessels that are seen at other times actively plying upon these rivers, freighted with rich cargoes, the greater portion now lie inactive.

As a general rule, it may be stated that the water is lowest during the months of July, August, and September. The autumnal months are frequently dry, and the river remains low, in that case, until the winter. More usually there are slight rises of water throughout the fall season, which render the navigation practicable; and as the weather becomes cold, there is a gradual increase in the volume of water. Throughout the winter, the frequent changes from cold to moderate weather, produce rains and rapid thaws, which occasion a series of freshets, and afford an ample supply of water.

The change from the severe cold of the winter, to the higher temperature of spring, is usually sudden, and is attended by the precipitation of vast floods into the channels of the larger rivers. The snows that lie deep upon the Allegheny mountains, are rapidly melted, and the immense mass of water which is thus produced upon the whole of the western declivity of that wide chain, from the borders of New York to those of North Carolina, are thrown into the Ohio. If the melting of the snow is accompanied by heavy and general rains, which is often the case, it will be seen that causes are brought into operation, of sufficient magnitude to produce the most astonishing results. The long and deep channels of the rivers become filled to overflowing, the islands sink beneath the surface, the alluvial bottoms and lowlands are covered, and we gaze upon a mass of waters, the immensity of which creates a feeling of awe, as well as of intense curiosity.

This accumulation is attended with but comparatively few inconveniences, and scarcely any danger, while its beneficial effects are incalculably great. The arrangements of Providence, intended for the advantage of man, however gigantic and uncontrollable, seldom carry with them any cause for terror. We have none of those sudden and precipitous floods, which in mountainous districts, are sometimes poured down upon the valleys, with unexpected violence, attended by widespread desolation of life and property. Our rivers rise with rapidity until the channels become nearly filled; but as the waters swell to the brink, the width and capacity of these reservoirs become so great, the inlets and branches so numerous, the lowlands to be covered so wide, that the perpendicular accumulation of the volume becomes slow and gradual. After leaving the immediate region of the mountains, the descent of the water courses is so gradual, as to prevent the flood from rolling forward with violence, while the channels prepared for it by nature, and planned upon the most magnificent scale, are too immense to be rapidly filled to overflowing.

In speaking of the lowlands which border on the river Ohio, we use a phrase, which is comparative in its import. When the waters are low, or even at the medium height which affords safe navigation for the largest vessels, the voyager sees the alluvial banks high above him on either hand, and can scarcely imagine that any concurrence of ordinary natural causes, can produce a volume of water of sufficient magnitude for their submersion. The increase of water therefore, to the point at which inundation commences, is not the work of an hour nor of a day—it is not like the hasty rising of a brook, nor the rush of a mountain torrent—but the powerful swelling of a great stream, increasing with gradual and majestic progression, and affording to man and brute, due notice of its approach. In so large a volume of water, it will also be readily understood that the force of the current will be near its centre, the portion that rolls in contact with the banks will have a retarded motion, while that which overflows the flat lands, will be stagnant, or flow gently backward in eddies. Such in fact is the invariable operation of these great causes; and although domestic animals which linger on the higher spots of the shore until the surrounding lands are immersed, and their retreat is cut of, are sometimes drowned, and although fences are floated off, there is never, on any of the overflowed lands, a strength of current great enough to sweep away permanent dwellings, or to endanger the lives of men or cattle, where ordinary prudence is used.

As the waters rise, trade and navigation are quickened into activity. The largest vessels now float in safety; the steam boat of six hundred tons burthen, is as secure from the dangers of the river navigation as the lightest skiff; and it is a noble sight to behold these immense vessels, darting along with the current, with all the additional velocity which can be given by a powerful engine, or stemming with apparent ease the rolling torrent, whose immense bulk seems to give it a fearful energy, which no human means might attempt to overcome.

At this season the spectator who is stationed upon the shore,—perhaps at a spot where no human dwelling is within sight, and where the wilderness is untamed and unaltered,—sees these vessels passing in rapid succession, —not unfrequently several at the same time being visible —laden so heavily that the whole hull is immersed, and it would seem as if the least additional weight would sink them.

The flat bottomed boats are also numerous at this season. These are built along the shores of the river, but more frequently on its tributary streams, and often on the smaller rivers and creeks, far inland, and at points beyond the reach of all ordinary navigation. Here they lie, with their cargoes, waiting until the annual rise of water shall afford them the means of proceeding upon their voyages; when they are floated off, with their immense freights, consisting chiefly of the heavier articles of the produce of the country.

The highest rise of water which has been known for many years, was the great flood of 1832, with regard to which our friend Dr. John Locke of Cincinnati, has been kind enough to furnish us with the following memoranda, of observations made by himself at that city, and which are rendered valuable, by the undoubted accuracy and skill of that gentleman in his philosophical investigations.

The section of the river opposite to Walnut street, Cincinnati, at low water, would be 1006 feet wide at the surface, and 7 feet deep, at the deepest place. The area would be 4774 square feet.

The rise of water which commenced early in February 1832, reached its greatest elevation on the 18th day of that month, when it was 63 feet perpendicular above the low water mark; and the sectional area became 91,464 square feet, without including its extension over the lower parts of Cincinnati and Covington. The number of cubic feet discharged per hour, was - 2,998,529,714

The number of cubic feet discharged per minute, was - - - - - - 48,308,828

The number of cubic feet discharged per second, was - - - - - - 805,147

The velocity of the stream was ascertained to be 6⅓ miles per hour.

Such a stream would fill a lake, presenting an area of one square mile, 107 feet deep, in one hour.

Having ascertained the quantity of water discharged, the next inquiry was in relation to the sources of the flood. The first point to be examined was in reference to the area of the valley of the Ohio, and its waters, *above Cincinnati*, or in other words, the extent of the surface drained by the tributaries which are discharged into the Ohio, above our city.

		Square Miles
This valley includes about	$\frac{2}{3}$ of Ohio, - -	27,000
	$\frac{1}{3}$ of Virginia,	27,000
	$\frac{1}{5}$ of Kentucky,	7,000
	$\frac{1}{3}$ of Pennsylvania,	14,500
	of New York,	1,000
	of Maryland,	500
	of N. Carolina,	500
	Total,	77,000

By calculation it appears that a depth of *four* inches only, over this immense space of *seventy seven thousand* square miles, was sufficient to maintain the river at the above uncommon height and velocity for *fourteen* days.

The winter of 1831-2 had been unusually severe, and the ground was frozen to a great depth, when there suddenly fell, according to the register of Dr. Hildreth of Marietta, eight inches of rain. Ordinarily, most of the water which falls to the earth, is absorbed by it; but in this instance the surface being completely sealed, the whole of the water which fell, was suddenly thrown into the channels of the rivers. This appears to be a probable and sufficient cause, for the inundation which destroyed so much property, and caused so much distress and alarm. If it be the true theory, it follows that no such flood can happen in the temperate months, nor at any season, except upon a conjunction of circumstances, so rarely occurring in combination, as to render its recurrence probable only at remote periods—perhaps not more frequently than once in a century.

A general law in relation to freshets in rivers, is, that the water attains its greatest elevation at a point nearly midway in the length of the stream. The rule applies usually to each stream *proper*—each having its separate valley; and would be operative upon the Ohio, within the limits embraced by its name, beginning at Pittsburgh, and ending at its confluence with the Mississippi. The application of such a law, cannot however be very exact, as it will be modified by a variety of circumstances. It can only be assumed as a fact of usual occurrence, growing out of very obvious reasons, that, the causes which produce a freshet, act with powerful and rapidly augmenting force, to a point somewhere nearly midway of the course of the stream, from which point the counteracting causes begin to operate, and the volume becomes diminished in depth by the greater width of the channel, by absorption upon the overflowed grounds, by evaporation, and by other means. Assuming Cincinnati to be sufficiently near a central position, as regards the length of the Ohio, to satisfy this rule, we may suppose that the greatest periodical accumulation of water is at this point, and adopting the data afforded by the great rise in the spring of 1832, the height of *sixty three* feet may be safely given, as the maximum perpendicular increase above low water mark.

The mass of water occasioned by these causes, comes loaded with floating logs and drift wood,—not however in such quantities as to impede the navigation—and with alluvial soil, and silicious particles, swept from the shores; and as the waters which spread over the bottom lands, soon become nearly stationary, the earthy matter held in suspension settles down, and adds a rich coat to the soil, while the floating wood is left in the same position by the subsiding of the flood. Hence the annual accumulation of the alluvion lands; and the regular formation, in consequence of which the surface is always found to be most elevated, near the margin of the stream, where the first and most abundant deposite is made, as the water flows outward over the banks.

In lower water the navigation of this river is impeded, in its upper portions by ledges of rock, and lower down, by snags and sandbars. These obstructions might undoubtedly be removed; and as there is scarcely any subject of so much importance, it seems to us that there has been a singular apathy in the public mind in relation to it. The Ohio and Mississippi rivers stretch from one end to the other, of this great valley, and extend their larger tributaries throughout its whole breadth. The Atlantic itself does not, within our empire, wash so extensive a line of coast, or bear the freights of commerce to so many ports. Thirteen states and territories, embracing half the members of the union, and a still larger proportion of its surface, lie in contact with these waters, and are directly interested in their navigation. It is therefore as much a matter of national concern, and as important to the American people, to improve the natural avenues of intercommunication afforded by those rivers, as the protection of our commerce on the ocean by a naval force, or the construction of harbors and light-houses for its convenience. The one is a *national* commerce, not because it embraces an intercourse with foreign countries, but on account of its general utility, and of the numbers who enjoy its benefits; and the other is equally national for the same reasons. Like the ocean too, this great thoroughfare is common to all. It is difficult to say which state is most interested in its trade and navigation, or where the line of demarkation would be drawn, which should separate the direct interest of one from another, or shew where one ended and the other commenced.

But these are precisely the kind of public improvements which have been, least of all, pressed upon the consideration of the general government. The western states, very properly, consider themselves entitled to a liberal share of so much of the public treasure as may be set apart for such purposes; for all of them, in which the land is owned by the government, have made concessions which far exceed the donations received by them. The appropriations of the general government, in aid of internal improvements, have usually received their direction from calls made upon congress by the state legislatures; and the latter, influenced by selfishness, by personal considerations, and by that very natural species of patriotism which looks first at home, and *only* at home, have been in the habit of confining their recommendations, chiefly, to objects of public utility within their own boundaries. All of them have claimed assistance for their colleges, their common schools, their roads, or their canals: praiseworthy objects, upon which we care not how liberal, or how lavish, may be the expenditure of the federal treasure. But there has been an absence of that enlarged policy, which should have looked to results of wider and more permanent advantage to the whole west; and which should have brought the combined interest of the whole to act for the general good. Appropriations of money for purposes of limited or doubtful utility have been passed with difficulty through the legislative branches of the government, and have sometimes been arrested by the executive; for they must struggle against selfishness, opposing interests, constitutional scruples, and even political intrigue. But works like those under consideration, would be obnoxious to no objection, nor alarm any honest scruple; and a weight of influence might be arrayed in their favor, which would look down every shadow of opposition. If the whole west should unite in demanding from the national treasury an appropriation sufficient to complete all the labors requisite to the improvement of these rivers, no state, nor combination of states, could arrest the passage of a law which should provide for so noble an object—Pennsylvania and Virginia being parties concerned, and New York having a direct interest and connexion with the west, which would conciliate her favor. Among ourselves, there could be but one opinion. There is not a farmer, a merchant, nor an owner of real estate, in the west—not a man who has interests in common with those of his country, who would not be directly benefitted, by such improvements as should make the Ohio and Mississippi rivers navigable throughout the year.

That such improvements are feasible, that they are within the scope of the means at the command of the nation, and strictly within the constitutional exercise of its power, are points, which we think will not now be disputed, by any reflecting mind. The rapids in the upper parts of these rivers, are composed of ledges of rock, or masses of loose stone, through which permanent channels may be made with facility. The snags, once so formidable, have been greatly diminished in number, and may be entirely removed.

The reader is probably aware, that *snags* are formed by the trunks of large trees, which are precipitated into the river by the crumbling of the banks. The base of the stem, with its mass of lateral roots, would by its own weight be sunk to the bottom, but it is rendered still heavier by the mass of clay which adheres to it. This part therefore, sinks—the top of the tree floats, and is thrown into the direction of the current—the roots bury themselves in the mud, and the subsequent deposites of sand or earth, fix the obstruction firmly in the channel. The smaller branches of the tree soon drop off, and the large limbs remain, pointing down the stream. When these sunken trees, are concealed beneath the surface, they are very dangerous to boats ascending the stream, which rushing upon them with the momentum given by a powerful steam engine, seldom fail, when they strike them, to have the hull of the vessel completely perforated.

This subject has already received some attention from Congress, and the results have been auspicious. Taking all that has been done together, little as it has been, we are not aware that any expenditure of public money has been more judicious.

In the year 1819 an examination of the whole bed of the Ohio was made by a board of commissioners appointed by the several states interested, whose report justified the hope that the navigation of this fine river was susceptible of great improvement.

Subsequent examinations have afforded more minute details, tending to strengthen the opinion then entertained. We copy the following just remarks, from a report made in 1835, by Lieutenant G. Dutton, of the United States corps of Engineers.

"The Ohio river derives from the Allegheny its principal and most lasting supply; during the summer months its volume is maintained, and very frequently increased, by occasional rains during that period, which enlarge materially the supplies drawn from the copious basin of this tributary, and it is only during a season of unusual drought, that it arrives at its minimum stage; this, from a comparison of the best authorities, is assumed at 15 inches. The least depth obtained during the examination this season was 2 min. 2 sec., although the water, for the brief space of a few days only, has been as low as two feet over some of the shoals between Pittsburgh and Wheeling. The Ohio through its whole course has in general a very equable and gentle current. During high stages this is the most uniform, although its rate is then considerably increased; at low stages the river becomes resolved into a succession of ripples, with extensive slack water basins between them varying in depth from two to three, and even five fathoms. The valley of the river is bounded on each side by richly timbered hills of great uniformity in their average height, enclosing fertile bottoms which alternate in very regular succession on either side of the river; ledges of rock occasionally appear along its banks; these are generally of stratified and easily wrought sandstone.

"There are few points on the river deserving the name of gorges; the nearest approach to an opening of that character is found at Brown's island, 65 miles below Pittsburgh. The heights here approach within the distance of 600 yards, and ledges of rocks exhibit themselves on each side of the river. There are several other formidable passes on the river, which however, in comparison with the shoals are few in number; of the character alluded to are Captina and Buffington's islands, and the rapids called Le Tart's falls; these are more dangerous for the passage of keel and flat boats than for that of steamers, which under the management of careful pilots, are exposed to little risk, when there is found sufficient depth of water at those points for floatage. The obstructions in the river generally arise from want of sufficient depth of water, over many of the shoals at low stages. There are points however, where owing to the existence of projecting rocks, the navgiation is not safe for as much depth as is contained in the channel. The bars in the river may be classed, 1st, into those formed of hard and apparently of permanent gravel; 2nd, shifting or loose gravel; and 3rd, shifting sandbars. The first abound in the upper section of the river. These are generally exposed to a strong current, and formed of rounded oblong pebbles and stones, varying from one to fifty pounds and upwards; they become by the continued action of the water, cleared of all smaller particles, firmly imbedded, and by their conformation resist the action of the current, the bottom assuming the consistency of, or similarity with, a pavement of smooth stones.

"The bars of the second class are composed of fine gravel, moveable by strong currents, and occur, as well as the sandbars at the lower junction of the chutes formed by the islands; these change their position, when upon the fall of the waters, the main channel of the river predominates in a new direction, and the fall and current increase by the subsidence of the lower basins. In the upper section of the river, the sandbars are always found under the lee of the islands, or at the meeting of the channels. In the lower are extensive sandbars unaccompanied by islands; the most important of these are met with between Guyandot and Cincinnati. In addition to the shoals, large quantities of logs and snags are distributed in different parts of the river. On some of the shoals, they lie imbedded in the gravel, forming dangerous obstructions to the low water navigation. Large trees with their roots, branches, and foliage, in full verdure, undermined and thrown into the stream by the gradual abrasion of the alluvial banks at high water, are of frequent occurrence. Many logs are disgorged from the smaller tributaries and creeks which empty into the Ohio. These creeks, when swelled by rains into rapid torrents, discharge large quantities of pebbles, and large angular stones, into the bed of the river; in many cases forming extensive bars at their junction.

" In descending the river from its head, a considerable improvement is experienced in the depth of water after reaching the foot of Wheeling island; from this point the river, at stages admitting the passage of light draught steamers, is practicable for about six inches greater draught than the section above it. This circumstance is not due to the reception of any important tributary to its waters, but solely to the decrease in the rapidity of its descent; this difference in the depth is less perceptible at an extreme low stage. From a comparison of the best data obtainable, the descent from Pittsburgh to Wheeling has been estimated approximatively, at one foot to the mile; from Wheeling to Guyandot, eight inches; and thence to Louisville, four inches per mile. Below Guyandot, the character of the river becomes materially changed; it here enlarges its bed, and flows onward with a diminished current; the level reaches are longer, and the descent at the ripples less. This enlargement of its bed, however, renders the depth over some of the shoals in this part at the river, very slight at low water, forming several very shoal sand and gravel bars. From Cincinnati to Louisville, the navigation becomes comparatively much improved. There are two or three bars on this section, and some dangerous snags below the mouth of Kentucky river, which require attention. It would be desirable to give a specific description and sketch of each shoal, were it not that their great number and similarity would render such description a monotonous repetition of nearly the same circumstances.

"An important feature in the Ohio river is observable in the fact, that at all the islands are also located the worst shoals and rapids, or falls. These islands are considered rather the effect, than the cause of this fall, and formed, like the alluvial bottoms, by the gradual deposite from the river, which, at those points being spread out at low water, leaves some portions of the projecting parts of its bed uncovered. In respect to Captina and Buffington's islands, the low water channel at each deflects from the main direction of the bed, and passes off laterally, through a narrow and circuitous route, around the island. The main or direct channel, in both the cases alluded to, is rendered dangerous by rocks, and too shoal at low water for navigation.

"The rocks in the Ohio chute, at Captina island, appear, from recent examinations, to be of a detached character, and susceptible of removal. The direct channel at Buffington's island, is bounded by a ledge of stratified sand stone rock, projecting into the river, which is supposed to continue entirely across the channel, beneath the gravel bottom; it is, however, situated nearly at the foot of the rapids. Some loose rocks are scattered in this channel.

"With regard to the islands, and particularly those at which the low water channel deviates from the direct continuation of the main bed of the river, shifting bars are always found under the lee of the islands. This rule appears, from the result of my examination, to be of general application in regard to all similar points on the river. The water, at high stages, passes with the greatest volume and current through the most direct and spacious channel, which then predominating, throws into the foot or junction of the smaller passage powerful eddies, depositing therein a bar, which again changes and deepens upon the fall of the waters. With regard to the rapids, called Letart's falls, the river here passes over a rocky bottom, with a descent and current far greater than is found at any other point above the falls; the bottom is free from dangerous projections, and the concentration of the water at this place, by the more prominent parts of the rocky bed on each side, renders the depth over these rapids much greater than upon most of the shoals in the river. The current, which is here five and three quarters miles per hour, at a moderate stage, can, in general, be stemmed by steamboats of sufficient power; but for keel boats, and the lighter class of steamers, permanent warping fixtures are here necessary. The points most requiring immediate attention, in the shoaler section of the river, lying between Pittsburgh and the junction of the Muskingum, at Marietta, are, Logtown bar, Black's and Brown's islands, Beech Bottom bar, McMahon's creek below Wheeling, which requires the removal of many dangerous rocks and logs, Captina island, Petticoat ripple in the long reach, Carpenter's bar, and Marietta island; at this latter point, the junction of the Ohio channel, opposite to the town of Marietta, is crossed by a large bar of loose shifting sand, which makes from the foot of the island across to the mouth of the Muskingum. At the head of the island, three miles above, the Virginia channel is crossed by a shoal gravel bar.

" By the execution of that part of the plan of improvement now in progress, viz: the removal or clearing the channel of all sunken logs, stumps, snags, and projecting rocks, the navigation at low stages, and particularly for light draught steamers and keel boats, will be rendered much safer, and even practicable for a deeper draught, than it is under present circumstances considered prudent to employ. There are some sand and light gravel bars, which are among the very shoalest on the river, but which, notwithstanding. are not ranked among the most serious obstructions, from the comparative safety with which their passage may be attempted. A system of improvement, having for its object to secure a specific depth of water at all seasons, sufficient to meet the demands of the trade upon those streams which are rendered impassable during the dry seasons, from the diminution of the supplies derived from their tributaries, can be effected with certainty only by a series of dams and locks.

"As this mode is not, however, contemplated with regard to the Ohio, the concentration of the river into one channel, and the appropriation of all the water passing, to that object, during low stages, will, it is believed, accomplish all the further improvement contemplated."

The project of removing the snags and sunken timber from the beds of the Ohio and Mississippi, originated with Captain Henry M. Shreve, who next to Fulton, has done more for steam boat navigation in the west, than any other man. He contrived a steam boat, for this purpose, which operates with such speed and energy, that scores of the largest trees are raised in a day, with the assistance of a few hands. The business of removing snags is performed only when the water is low; at other times the crews of the boats are employed in cutting away the overhanging timber from the *falling in banks*,—that is from such banks as are gradually becoming undermined by the action of the current, and which supply the greatest amount of these dangerous obstacles to navigation. The boat is of the most simple construction, yet has such power, that the largest tree, however firmly fixed, is removed in a few minutes. A number of these ingenious vessels have been employed for several years, under the direction of Captain Shreve, in the Ohio and Mississippi, and thousands of snags have been removed by them. In the year ending in September 1833, 1960 were taken up in the latter river, and supposing many to have been left, the chances of danger to ascending vessels, were diminished by at least that number. Within the same year, the crews of those boats were employed, when the water rose too high to admit of working on the bed of the river, in cutting away the trees which overhung the stream, or stood on banks liable to be undermined, and actually felled 10,000 trees, which must soon have been precipitated into the mighty current. The same operation has now been continued for several years, at an annual expenditure of less money, than was previously lost by the yearly destruction of property, from this single cause—to say nothing of the loss of life. It is true that the obstructions are continually renewed; but the number of trees which are thrown into the stream, must be annually decreased, by the settlement of the country, and the consumption of timber for fuel, by steam boats. Firewood has already become a valuable article; and but few years will elapse before every tree, on the margin of a navigable river, will have acquired a value sufficient to induce measures for converting into fuel, the whole of that immense mass, which would otherwise have been carried away by the spring floods.

The sandbars of the Ohio, present a more permanent and serious obstruction to navigation. These are numerous—many of them extending entirely across the bed of the river, and affording less than two feet of water in any part. To cut a channel through a bank of sand, would not be impracticable; but the excavation thus effected would be filled by the deposites of the next flood. It is difficult to project a remedy for this evil, which shall be effectual and permanent. About ten years ago, Colonel Long of the topographical engineers, was instructed by the government to make an experiment, and adopted the plan of throwing out wing-dams from each side of the river, so as to confine the current within narrow bounds, and to give it sufficient volume to wash a channel for itself. He spent a summer in constructing such a work at Henderson bar, 200 miles below Louisville. The dams were constructed of piles driven into the sand and rising but a few inches above its surface. The enterprizing Captain Shreve has since pursued and improved the same plan, and has constructed similar dams at French island, at Three-mile island, at Scuffletown bar, and at the Three sisters. These were formerly the shoalest and most difficult bars in the Ohio; they have been greatly improved, and may now be passed in the lowest water. The most extensive of these works, and that which, if successful, will most satisfactorily attest the correctness of the principle which applies to them all, is the one now in progress and nearly completed, at Cumberland island, near the mouth of Cumberland river. It is proposed to change the channel of the river, so as to force its waters to pass between the island and the Kentucky shore, by which means a channel will be washed through the bar below, and the mouth of the Cumberland river relieved of a very formidable obstruction. Two hundred men were employed last year on this work. The length of the dam is about half a mile, its width at the base thirty feet, and its height sixteen feet; it is composed of large masses of limestone rock, quarried from the shores above.

Some diversity of opinion has been entertained, as to the advantages to be derived from these operations, in reference both to sandbars and snags; but the doubts are not greater, nor better founded, than those which have invariably assailed every novel and bold undertaking. It is obvious too, that many of them proceed from interested persons; the pilots decry every improvement in the navigation of the rivers, which by making it more safe and easy, has a tendency to render their own calling less important, and their services less valuable, while the owners and officers of insufficient and badly managed boats, are always ready to attribute those disasters, by which life and property have been wantonly endangered to any other cause than their own cupidity or criminal mismanagement.

The only objection to any of these measures, is that they have not been attempted on a scale of magnitude becoming their importance, and urged with all the energy which could be given by the resources of a great nation. The western plain is the centre of our empire, the citadel of its strength, the magazine of its resources, the *heart*, whose healthful operation must throw out nourishment and vigor to the whole continent,—and here should the nation lay deep and broad the foundations of its future greatness.

CHAPTER III.

The River Mississippi.

From the Ohio, we proceed naturally to that part of the Mississippi river, comprised within the region to which we confine our remarks.

In descending from St. Louis, the traveler is at once struck with the magnitude and boisterous character of the stream which has been so appropriately called, the Father of waters. The current is powerful and impetuous. The water, loaded at all seasons with particles of white clay, carries upon its discolored surface, the evidence of the violence which it is continually committing upon its shores. The torrent itself, has always an angry appearance—boiling up or whirling round in eddies, and foaming, and lashing the shore, as it rushes along. On the Missouri side, a large portion of the country is high and broken, and the river often sweeps along the rocky bases of abrupt hills—behind which are the regions of lead and iron. Between these elevations are large tracts of alluvial bottom lands, which predominate on the Illinois side, whose shore presents an almost unbroken line of forest trees, extending their luxuriant foliage to the water's edge. The low, ragged, broken banks, are subject to continual change—accumulating at one point, while at another they are undermined, precipitating masses of earth and immense trees, into the headlong torrent, to be whirled in its eddies, or planted in its navigable channels.

Almost midway between St. Louis, and the mouth of the Ohio, masses of limestone rock are seen on either side, which, though now unconnected, have the appearance of having once formed a continuous ridge, crossing the general course of the river in an oblique direction. It has been suggested that a cataract, as mighty as that of Niagara, may once have existed at this spot. If such was ever the fact, the barrier has now been worn down to the general level of the channel of the river. But there is no reason to believe that such obstruction ever existed at this place, as the surface of the plain, on the Illinois side of the river, is such as to give a decisive negative to the supposition; for the river, if obstructed here, would have flowed over the low ground on that side, instead of being dammed up at this point. The stream thus confined, is narrower here than above or below, and in crossing the rocks, its course suddenly changes to a direction nearly at right angles with that of the ridge.

Approaching from above, we first discover the ridge throwing out a bold promontory into the stream on the Illinois shore, on the extreme point of which, is a large rounded mass of rock, 50 or 60 feet in height, shaped like an oven, and thence termed the Devil's Bake-oven. A low neck of land connects this with a range of perpendicular rocks, which frown in rugged precipices over the stream, and whose summits are beautifully crowned with vegetation. As the current sweeps abruptly round this cape, another promontory is seen jutting out from the opposite shore. Against this the whole force of the current beats with fearful velocity, and by its attrition, has worn it away until a large fragment has been separated, and left standing in solitary grandeur in the midst of the waves. This is the Grand Tower. Its height may be 50 feet, and its diameter about the same. Its contour is remarkably exact and symmetrical, forming a column as nearly circular as if its proportions had been marked out by the hand of art. The sides are nearly perpendicular, but the different strata distinctly marked out. The whole has the appearance of a regular column, whose height is equal to its diameter. The top is flat, and supports a stratum of soil, which gives birth to a short, but rich growth, of trees and shrubs.

In our early history, this was a noted spot. The river boats, which before the application of steam, were propelled up the stream with difficulty, by human labor, were unable to ascend this rapid pass with oars or poles. Not only was the current too strong for this operation, but the danger of being dashed against the rocks, was imminent. The only way to surmount these obstacles was, to drag the boat round the cape on the Illinois side, by means of ropes. To effect this object, it was necessary for a portion of the crew to land, and an opportunity was offered to the Indians to attack them, when the prospects of resistance or of flight, were equally hopeless. Here then they formed their ambuscades, and many a crew was slain at this spot, to gratify the savage lust for plunder and revenge, while many boats were wrecked by the violence of the waves.

These dangers exist now only in tradition. The Indians have retired, and our own industrious citizens inhabit these shores; while the introduction of steamboats has obviated the dangers of navigation, and rendered this spot as safe as any other. When we behold the steam vessel slowly and majestically overcoming the mighty current, riding along in perfect safety, and then turn our eyes to the surges which are beating against the rocks and sending up their sheets of white foam into the air, we cannot but acknowledge the deep debt of gratitude, which our country owes to the memory of Fulton. And when we behold this grand and durable tower, so graceful and so appropriate in its form, so appositely placed in the midst of scenes, calculated to awaken respect for the genius, and gratitude for the services, of Fulton, we are induced to hope that a monument, to the fame of this illustrious citizen will be erected upon this natural pedestal.

The *devil's tea table*, and other appurtenances of the dominion of his Satanic majesty, are found in this neighborhood. The *cornice rocks*, are great curiosities. The perpendicular sides of the limestone precipices, have been worn by the water into regular shapes, and in some places, a continuous formation resembling a handsome cornice work, may be seen, overhanging the cliffs, whose sides represent columns, and other architectural devices.

The *upper* Mississippi is a much more beautiful river than it is generally believed to be. In richness, beauty, and variety of landscape, it far surpasses the Ohio; and we cannot conceive why the French, who knew both, should have called the latter *la belle* in preference to the former, unless, indeed, they considered that it would have been a solecism in language to have made a *belle* out of the Father of streams. For the first thirty miles above St. Louis, the country, although extremely rich and valuable, is not interesting in its appearance. Within that distance, the Missouri river comes in on the one hand, and the Illinois on the other; and after passing the latter, the shores become attractive.

The whole character of the river is changed, after passing the mouth of the Missouri. Above that, the Mississippi is a clear stream, with a strong, but smooth current. Instead of the low alluvial banks, which are continually accumulating at one spot, and falling in at another, as is the case upon the lower Mississippi, here are bold and beautiful shores, such as no other river that I have ever seen, can boast. On the Illinois side, we now behold a range of tall bluffs, rising perpendicularly from the water's edge, to the height of from one to two hundred feet, and faced with a solid bed of limestone.

In looking at these bluffs, the imagination readily suggests the idea, that the river has once flowed upon a level with their summits, and has cut its present channel, by the action of its current. This is doubtless in part true, in reference to this, as to all other rivers. But the appearances which cause this conjecture may be accounted for much more easily. The horizontal lines and projections, resembling long rows of cornice, which are noticed by the voyager far above his head, have doubtless been produced by the trickling of the rain water down the sides of the precipice. The strata being horizontal, and of different degrees of hardness, the particles have been removed most rapidly from the softer parts, and with a regularity corresponding with the formation of the rock. The escarpments or steep sides of the rock, exhibit no angular shapes, but are smoothed and rounded as if by the long continued action of a powerful current of water.

Numerous holes appear in the face of the solid rock, sometimes shallow and irregular, but often deep and cylindrical; they are precisely such as geologists call *pot-holes*, and are far above the present high water mark. Every projection is rounded, and every cavity is globular, and so regular has been this operation, as to have produced in some instances, a series of columnar formations, which display much of the symmetry of art, and extending from the base to the summit of the rock, seem like immense buttresses intended to strengthen and support these massive walls. The peaks seem to have been long since decomposed, and have mouldered down into gracefully rounded hills, covered with vegetation. These summits are on a level with the plane of the country.

After passing a few miles further, these vertical declivities are no longer presented to the eye. We now see the crystal stream beating against a bank of gravel, from which the shores rise with a gradual slope. In a few instances the hills rise boldly from the water's edge, or push out their steep promontories, so as to change the direction of the river; but more generally we see on either bank a series of graceful slopes, swelling and sinking as far as the eye can reach. The prairie, for the most part, extends to the water, and no pen can describe the singular and captivating effect of such scenery. Imagine a stream of a mile in width, whose waters are as transparent as those of the mountain spring, flowing over beds of rock or gravel. Fancy the prairie commencing at the water's edge—a natural meadow covered with grass and flowers, rising with a gentle slope, for miles, so that in the vast panorama, thousands of acres are exposed to the eye. The prospect is bounded by a range of low hills, which sometimes approach the river, and again recede, and whose summits, which are seen gently waving along the horizon, form the level of the adjacent country. The prairies are not flat, but composed of a succession of swells, and the idea impressed upon the mind by the whole conformation of the surface is, that the level plane of the country once terminated on the brink of the river, that the channel of the latter has been for ages increasing in depth, and that the vales which we now see receding from it, were at first mere ravines, washed by the torrents of rain water, which have been gradually widened and rounded off by beating rains, into their present harmony of outline. The timber is scattered in groves and strips, the whole country being one vast illimitable prairie, ornamented by small collections of trees. Sometimes the woodland extends along the river for several miles continuously—sometimes it is seen stretching in a wide belt far off into the country, and marking the course of some tributary stream, and sometimes in vast groves, of several miles in extent, standing alone like islands, in this wilderness of grass and flowers. But more often we see the single tree without a companion near, or the little clump composed of a few dozen oaks or elms; and not unfrequently, hundreds of acres embellished with a kind of open woodland, and exhibiting the appearance of a splendid park, decorated with skill and care by the hand of taste. Here we behold the beautiful lawn enriched with flowers, and studded with trees, which are so dispersed about as not to intercept the prospect—standing singly, so as not to shade the ground, and occasionally collected in clusters, while now and then the shade deepens into the gloom of the forest, or opens into long vistas and spacious plains, destitute of tree or shrub.

We doubt whether there can be found, on the globe, a tract of country to compare with this. Commencing a little north of St. Louis, and extending two hundred miles from east to west, and the same distance north, is to be found the most extensive tract of rich land in the world. Within these bounds, the country is nearly all as captivating to the eye as that which we have described. Scarcely any of the land is subject to inundation. On the contrary, although incalculably rich, and sufficiently level for cultivation, it is a high, rolling, champaign country, and the shores of the streams are mostly bold. Healthy it must be.

At the foot of the upper rapids is one of the most picturesque scenes that we recollect to have beheld. On the western side, a series of slopes are seen rising one above another for a considerable distance, until the back ground is terminated, by a chain of beautifully rounded hills, over the whole of which trees are thinly scattered. On the other side of the river, is a broad flat plain of rich alluvion, several miles in length, and more than a mile in breadth, and terminated by a range of wooded hills. On this prairie is a small village of the Sauk and Fox Indians, composed of rude lodges, scattered carelessly about. Their chief village was a few miles in the interior; and it was for the possession of this beautiful country, that the followers of Black Hawk contended, in the recent war which resulted in such disastrous consequences to that ill fated tribe. In the front of the landscape, and presenting its most prominent feature, is Rock Island; the western shore of which, is washed by the main current of the Mississippi, while the eastern side is separated from the main land by a narrow channel, which is fordable in low water. The southern point of the island is elevated about 40 feet above the ordinary level of the river, and is supported by a perpendicular parapet of rock. Here stands Fort Armstrong, a strong and very neat work, garrisoned by two companies of United States' troops; and here will be one of the most desirable sites for a town, upon the upper Mississippi. Rock river, which enters into the Mississippi a few miles below the island, is a rapid stream, which may be easily rendered navigable; and which affords abundant water power for the propulsion of any kind of machinery. The whole of this region is fruitful, healthy, and agreeable to the eye, Here the wild honeysuckle flourishes luxuriantly; thousands of acres are covered with the wild gooseberry, plum, grape, mulberry, and other indigenous fruits, and the soil teems with the richest beauties and bounties of Providence.

Above this point the scenery becomes occasionally more hilly and diversified, but the same general character marks its features as far up as the falls of St. Anthony, and we shall only refer the reader to the volumes detailing the two expeditions of Colonel Long and his scientific companions, whose remarks, so far as we have trod over the same ground, we have found singularly accurate, and can recommend safely, to those who desire to make more minute researches, than those for which our own pages will furnish the materials.

CHAPTER IV.

General Surface of the Country.

The traveler who visits our Valley for the first time, advancing from the east, to the Ohio river, and thence proceeding westward, is struck with the magnificence of the vegetation which clothes the whole surface. The vast and gloomy grandeur of the forest, the gigantic size and venerable antiquity of the trees, the rankness of the weeds, the luxuriance and variety of the underbrush, the long vines that climb to the tops of the tallest branches, the parasites that hang in clusters from the boughs, the brilliancy of the foliage, and the exuberance of the fruit, all show a land teeming with vegetable life. The forest is seen in its majesty; the pomp and pride of the wilderness is here. Here is nature unspoiled, and silence undisturbed. A few years ago, this impression was more striking than at present; for now, farms, villages, and even a few large towns are scattered over this region, diversifying its landscapes, and breaking in upon the characteristic wildness of its scenery. Still there are wide tracts remaining in a state of nature, and displaying all the savage luxuriance which first attracted the pioneer; and upon a general survey, its features present at this day, to one accustomed only to thickly populated countries, the same freshness of beauty, and the same immensity, though rudeness of outline, which we have always been accustomed to associate with the idea of a western landscape.

I know of nothing more splendid than a forest of the west, standing in its original integrity, adorned with the exuberant beauties of a powerful vegetation, and crowned with the honors of a venerable age. There is a grandeur in the immense size of the great trees—a richness of coloring in the foliage, superior to any thing that is known in corresponding latitudes—a wildness and an unbroken stillness that attests the absence of man—above all, there is a vastness, a boundless extent, an uninterrupted continuity of shade, which prevents the attention from being distracted, and allows the mind to fill itself, and the imagination to realize the actual presence, and true character, of that which had burst upon it like a vivid dream.

This effect is the more uniform since the rivers have become the great avenues of commerce, and the explorations of the majority of those who travel, are confined to their wooded shores. Here the forest is most abundant, and the growth of the tree the most gigantic; and as the steamboat paddles her way rapidly through the water, the spectator beholds, for mile after mile, a continuous border of unbroken woodland, alternating with the village, or the solitary farm, which is occasionally presented to his view. In no instance does the prairie,—the natural meadow, clothed with grass—appear upon the margin of the Ohio, or of any of its tributaries; but invariably the rich alluvion lands that skirt those streams, and the low rounded hills, are shaded by a prolific growth of heavy timber.

But when the traveler forsakes the valley of the Ohio, and advancing westward, ascends to the level of that great plain, which constitutes the general surface of this extensive region, he finds himself in an open champaign country—in a wilderness of broad plains, covered with a rich sward of grass, and destitute of trees. The transition is as sudden, as it is complete. Behind him are the most gigantic productions of the forest—before him are the lowly, the verdant, the delicate, inhabitants of the lawn; behind him are gloom and chill, before him are sunlight and graceful beauty. He has passed the rocky cliff, and the savage mountain pass, where the den of the rattlesnake is concealed,—the marshes that send up fœtid steams of desolating miasma,—and the canebrake where the bear and the panther lurk; and has reached the pasture where the deer is feeding, and the prairie-flower displays its diversified hues. He has seen the wilderness in all its savage pomp, and gloomy grandeur, arrayed in the terrors of barbarian state; but now beholds it in its festal garb, reposing in peace, and surrounded by light, gayety, and beauty.

This distinction is not imaginary; no observing man can pass from one part of this region to another, without remarking the natural antithesis to which we allude; and that mind would be defective in its perceptions of the sublime and beautiful, which did not feel, as well as see, the effects of this singular contrast. There is in the appearance of one of our primitive forests, a gloomy wildness, that throws a cast of solemnity over the feelings, a something in the wide spread solitude which suggests to the traveler that he is far from the habitations of man—alone, in the companionship of his own thoughts, and the presence of his God. But the prairie landscape awakens a different train of thought. Here light predominates instead of shade, and a variety of hue instead of a wearisome exuberance and monotony of verdure; while the extent of the open scene which is spread before the vision, allows the eye to roam abroad, over an endless diversity of agreeable objects.

The same remarkable contrast is equally striking in the contour of the surface—in the difference between the broken, and the level districts. The former lie chiefly along the Allegheny mountains, and are composed of the lateral ridges which extend from the principal chain into the valley; the latter is the common formation of a great portion of this extensive country. If the traveler looks down from the western pinnacles of the Allegheny, he beholds a region beautifully diversified with hill and dale, and intersected by rapid streams, tumbling over ledges of rock, or beds of gravel. In western Pennsylvania, Virginia, Kentucky, and Tennessee, he finds every variety of scenic beauty—the hill, the valley, and the plain, the rocky cliff, the secluded dell, the clear fountain, and the rivulet pitching headlong from vale to vale.

The rivers have each their characteristic scenery. The Monongahela winding through a mountainous country, overhung with precipices, and shaded by heavy forests, with a current sufficiently gentle to be easily navigable by steam boats, has its peculiar features, which are instantly lost when the traveler has passed on to the bosom of the Ohio. The Allegheny differs from both; more turbulent than either, it has not the majesty of the one, nor the romantic beauty of the other. The winding course, and rugged scenery of the Ohio between Pittsburgh and Wheeling, impress the beholder as strikingly wild and picturesque; below the latter place the features of the landscape become softened, the hills recede farther from the river, are less lofty, and more rounded; and again, after passing Louisville, these elevations are seen less frequently, and gradually melt away, until the river becomes margined by low shores, and a continuous line of unbroken forest. But if we leave the gentle current of the Ohio, and ascend the Kentucky or the Cumberland, we again find rapid streams, overhung with precipices, and a country abounding in the diversities of bold and romantic landscape. Here may be seen the rapid current foaming and eddying over beds of rock, and the tall peak towering above in solitary grandeur. Here the curious tourist may penetrate the gloom of the cavern, may clamber over precipices, or refresh himself from the crystal fountain bursting from the bosom of the rock. But he will find every hill clad with timber, every valley teeming with vegetation—even the crevices of the limestone parapets giving sustenance to trees and bushes. Green River, though lying between these is essentially different from both: though often hemmed in by hills, its current is gentle, and its navigable facilities extended far into the country through which it flows.

The Kenhawa river deserves a separate mention. From its junction with the Ohio at Point Pleasant, the field of a battle in which the characteristic valor of Virginia was most conspicuously displayed, the traveler ascends a valley of little width, through which meanders a small and gentle river. A narrow belt of rich bottom land, divided into highly productive farms, is seen on one or the other side of the river, and sometimes on both—beyond which is a range of high, precipitous, and rocky hills. At a distance of about sixty miles from the mouth, by the meanders of the river, commences the richest *salt region* in the United States. It extends about ten miles along the river; and within that distance there are eighty or ninety separate establishments for the manufacture of salt, thickly scattered along the shore on either side of the stream. A large portion of the salt used in the west, has been furnished from these furnaces, which have proved extremely lucrative to the proprietors. Although they have been in operation for many years, the supply of brine remains undiminished, and the neighboring hills furnish an inexhaustible supply of bituminous coal, lying in thick horizontal *strata*, in sight of the furnaces, and in positions elevated a few feet above them.

Pursuing the river a few miles further, we arrive at a cataract formed by a ledge of rock which crosses its channel, and which forms a curious and beautiful scene. Immediately beyond this point, the landscape becomes grand and romantic, combining the wildest and most splendid features of scenic attraction. At the spot where the Gauley and New rivers unite, and merge their names, in that of the Kenhawa, we reach the foot of the mountains, down whose precipitous gorges these streams are seen rushing. The great road which pursues the valley of one of these tributaries, winding with its sinuosities, and for the most part hewed out of the sides of perpendicular parapets of rock, affords a series of the most extensive and sublime prospects. After toiling up an ascent of several miles, passing over deep ravines, and often turning the angle of a projecting cliff, along whose edge the traveler passes with an involuntary shudder, as he gazes on the perilous depth below, we arrive at the celebrated and magnificent spot called the Hawk's Nest. This is the highest peak of this part of the chain of mountains. It is not seen from the road, which at this point has left the steep side of the chasm, and passes for a short distance along a ridge shaded on either side by forest trees. The stage is stopped, in order that the natural curiosity of the traveler may be indulged in beholding a scene of uncommon grandeur. A small footpath leading at right angles is pointed out to him, pursuing which for a few yards, he suddenly finds himself standing on the projecting ledge of a precipice, from whose brink he may cast a stone into the New river, which foams over a bed of rock two thousand feet below him. The landscape is perfect—its extent, its grandeur, its variety, its romantic character, and the splendid beauty of its details, are incomparably magnificent. The sublimity of the scene, is not less than that of the Niagara cataract; its gigantic outlines fill the beholder with wonder, while the dizzy height at which he stands, on a narrow ledge, projected over a gulph of such awful magnitude, causes a sensation of terror to mingle with the thrilling sensations of astonishment and delight that fill his bosom.

The toils and perils of a journey over the mountains are amply compensated by a view of this fine scene, to which nothing of the kind can be superior. It is on the road which leads from Guyandot on the Ohio, by the Virginia springs, to Fredericksburg in Virginia. The road itself is a clay turnpike, nearly impassable in the wet season, but in the summer superior to any other by which the Allegheny ridge is crossed, and which affords infinitely the most agreeable route for an excursion from east to west in hot weather.

The scenery presented on the western shore of the Ohio, is altogether different. The mountain is seen no more; the hill, the rock, the precipice, and the limpid torrent occur but seldom; and although in Ohio the change is not so marked, as in the more western states, the traveler as he wanders successively over Indiana, Illinois, Missouri, and the vast wilderness beyond, is astonished at the immensity of the great plain, the regularity of its surface, and the richness, the verdure, and the beauty, of its wide spread meadows.

Whatever may be the purpose with which we contemplate the region now under review, it is necessary to keep in mind this important diversity of surface and production. To the poet, it affords the most picturesque and striking contrasts of scenery; to the inquirer after truth, it presents in an imposing manner, the extraordinary capabilities of a country, which embraces such varied resources for agriculture and trade, and possesses so happy an adaptation, to the different pursuits of life, and products of industry. To all it must suggest how defective and totally worthless are the accounts of those, who having visited one part of this country, assume to describe the whole; whose personal observations have been confined to the margins of the great rivers, while they have no knowledge of the prairies, nor can imagine in their wildest dreams, the extent, the fertility, the peculiar conformation, and singular agricultural advantages, of these interesting plains, and are equally unacquainted with the geology, the resources, and interior channels of intercourse, of this broad land.

There are some other distinctions which are necessarily to be considered, and to which reference should be had, whenever general remarks are made, for they will suggest the occasions where it may be necessary to make exceptions. In western Pennsylvania, and Virginia, the toils of the pioneer have in a great measure ceased, the log hut has disappeared, and commodious farm houses of framed wood, or stone, have been reared. Agriculture has assumed a permanent character, and is prosecuted with steadiness and method. In Pennsylvania, particularly, the immense treasures of iron and coal, and the great manufacturing ability of Pittsburgh, has given a peculiar character to the industry, and has caused the spirit of commerce and enterprise, to be widely diffused among the farmers. Great expenditures have been made upon roads and canals, and the traveler sees many symptoms of an active and prosperous traffic.

Ohio has grown more rapidly, and the new is here seen singularly mixed with the old—neat villages, extensive farms, and valuable improvements, alternating with rude hamlets, solitary log houses, or masses of unbroken forest. The appearances of commercial and agricultural activity, are of the most cheering character, the actual improvement which is going forward in every department of life and business, is great,—yet the exterior developement, as presented to the eye of the stranger, is new, rough, and uninviting. The beauty of nature has been destroyed, and the embellishments of art have not been supplied. Wealth and labor have been employed with great energy and success, in reducing the wild land into cultivated fields, in bringing the resources of the country into operation, and in providing the comforts of life; but few expenditures have been made for ornament or luxury. To him who passes rapidly through the land, and glances only at the rude exterior, every thing appears crude and unformed, but there is notwithstanding an admirable system in the industry, as well as in the social and moral condition of the people. The skeleton of a regularly organized civil society, with all its strong muscles and ligaments is vigorously developed, and those parts only are wanting, which are necessary to give grace and fullness to the outline.

Passing westwardly through Indiana, Illinois, and Missouri, there will be found still less appearance of improvement. In some parts of Indiana, the people are treading rapidly in the footsteps of those of Ohio, substantial houses have been built, and farms have been brought into a high state of culture. But generally speaking the settlers in these states continue to reside in their primitive dwellings; the log house, and the rough worm-fence, are the chief objects of human construction that meet the eye. The fields are rudely tilled, yet yield abundant harvests. There is an abundance, even to profusion, of all the necessaries of life, but none of the luxuries, and few of what would be called comforts, by those who are unaccustomed to the habits of the country. There is however a vast deal of substantial comfort, and the people are independent, cheerful, and intelligent.

The beauty that attracts the eye in this region, is that of nature, and is found in the wide tracts of wilderness that remain untouched by the axe or the plough. Such is the greater part of the country, over which the farms are thinly scattered, and where the cattle still roam at large through the woods and prairies, as in the days of the patriarchs. A large proportion of the people of these three states, partake more of the pastoral, than of the agricultural character. They belong to a race to whom wealth is not so desirable as to cause them to seek it by hard labor, and they aim at nothing beyond a competent support. Their numerous domestic animals, that feed in the natural pastures, and the game of the forest, supply them with food in rich abundance, and their fields are carelessly tilled, because the produce is of secondary importance.

But when we cross the Ohio, and pass through Kentucky, we find a different state of society, and a widely different aspect in the appearance of the country. In passing from Maysville to Lexington, the stage rolls over one of the finest Macadamised roads in the United States. The country is hilly, but moderately fertile, and well improved, until we reach the vicinity of Licking river. The agriculture is good, the houses well constructed, and comfortable. The forming stage of society is past, and much attention is paid to the refinements and courtesies of domestic life. On approaching Licking river a wild and sterile tract presents itself, extending for a few miles on either side of that stream. The hills are abrupt, broken, and rocky, the soil thin, and the vegetation stinted. The rocks are overgrown with moss and lichens, and instead of the tall timber of other localities, we find a straggling and dwarfish growth of low bushes. Nothing can be more dreary than this sombre landscape, or more strongly contrasted with the rich and cheerful districts that lie around in every direction. It is a mineral region, abounding in saline impregnations, and to this cause an acute writer attributes the appearances which we have noticed. Dr. Yandell, of the Lexington Medical school, remarks: "At one time the hills, which, now bare, show as wasted skeletons, must have had a covering of clay and vegetable mould, for the country in every direction, at the distance of a few miles, is rich, and clothed in luxuriant vegetation. It is well known that the first adventurers to the west, found it abounding in every species of wild game. Deer, elks, and buffaloes, were met with in numbers altogether incalculable. These animals resorted in vast numbers to the springs, and the latter came from a distance, and lingered for weeks in the neighborhood. It is said that the roads which they made in journeying thither, are still visible at this distant day. And finally, the mastodon, and arctic elephant, we may infer from the osseous remains that have been exhumed, were among the ancient visitors at these watering places. The effect of such a concourse of animals sojourning for weeks together in the neighborhood, and feeding upon the shrubs, herbaceous plants, and such limbs of trees as were in their reach, bruising and lacerating their roots in passing to and fro, must have been in time, the destruction not only of the grass and more tender herbs, but of the forests themselves; and the soil thus deprived of its necessary support, would be ultimately washed by rains into the streams and valleys. This cause, of course has long ceased to operate, and with its cessation, a new change has commenced. The soil is again in a process of renewal, and the sides and summits of the hills begin to assume an appearance of verdure and life."

Having passed through this region of sterility, the road to Lexington winds through an open champaign country of the most delightful appearance. The heavy forest, which once threw its deep shade over the lurking Indian, has been cleared away, and highly cultivated fields adorn the whole of the wide landscape. The surface is not broken by hills, nor is it level,—but of that beautifully rolling or undulating character, which is, above all others, the most pleasing to the eye, and the best adapted to the purposes of husbandry. Its similarity, in this respect, to the gracefully waving prairies in the central and northern parts of Illinois is very striking. The soil is of the richest kind, and the improvements not only substantial, but elegant. It is seldom that the eye of the traveler is delighted with so pleasing a combination of rural beauty and tasteful embellishment. The dwellings are commodious and comfortable: most of them are very superior to those usually inhabited by farmers, while many are the elegant mansions of the opulent and refined. These are surrounded by gardens and pleasure grounds, adorned with trees and shrubs, tastefully disposed. There is a something substantial, as well as elegant, in the residence of a farmer of this part of Kentucky; a combination of taste, neatness, comfort, and abundance, which is singularly interesting, and which evinces a high degree of liberality in the use of wealth, as well as great industry in its production. The fields are extensive and well cultivated. Not a spot remains in its pristine state of wilderness; but everywhere the hand of art is seen to have exerted its energies with an unusual vigor and felicity of execution. Every foot of ground has been adorned, or rendered productive. The woodland pastures which are peculiar to this section of country are remarkably beautiful, giving to its extensive farms an unusual degree of elegance, and to the whole character of the scenery an originality, which attracts the attention of the most casual observer, while it fills a genuine admirer of nature with the most pleasurable emotions. This agreeable effect is produced by a simple procedure. The woodlands are all inclosed; the underwood, and the useless trees are removed, while the valuable timber trees are left, standing sufficiently wide apart to admit the rays of the sun, and the free circulation of the air, between them. The ground is then sown with grass, and extensive tracts, which would otherwise have been mere wilderness, are thus converted into spacious lawns, studded with noble trees. These are so numerous, and of such extent, as to form a prominent feature in the scenery, and it is hardly possible to imagine any thing more beautiful, than the alternations of woodland and meadow, with hemp and cornfields, and orchards, which the eye here meets in every direction. The dwelling houses are usually large edifices of brick or frame, surrounded by numerous offices, and embowered in shade trees, among which the locust, and the lombardy poplar, are most frequently seen. The fences and other improvements are excellent, and the grounds neatly kept. The whole appearance is that of a country possessing wealth, industry, and refinement—the residence of a hospitable people, who cherish the social virtues, and who bestow much care in surrounding themselves with the comforts and luxuries of domestic life.

This beautiful region comprises several counties, and includes a circuit of more than forty miles in diameter, of which Lexington is the centre; but there are several other counties lying round it, but little inferior in point of fertility, and marked by similar features of industry, improvement, and manners.

The traveler cannot but pause to contrast the appearance of this country, with that of the wilderness which existed here forty years ago. Within the memory of living witnesses, the soil which is now so finely embellished, and which supports a numerous and highly refined population, was covered with luxuriant forests and vast canebrakes, which afforded shelter to the roving Indian, and the prowling beast of prey. Here were the lodge of the Indian and the camp of the solitary hunter. Here the pioneer endured in his rude log cabin, all the precarious toils and sudden vicissitudes of the border life, laboriously opening the rich soil to the action of the sun, felling one by one the gigantic trees, and resting by night, like the weary soldier, with his rifle by his side. And here are still seen the ruins of those primitive fortresses, which protected the emigrants and their families, from the tomahawk, when the savage warriors came in sufficient force to drive the hunter from his camp, and the settler from his newly cleared fields.

So rapid has been this change, and so complete the transformation, that it seems as if the pioneers who had expelled the Indian, and the beast of prey, had been in their turn supplanted by a more wealthy and refined race, who by the magic influence of gold, and the energy of a superior industry, had converted the face of the land from a desert to a paradise. But such was not the actual procedure. The wealthy farmers who now occupy the soil, the educated and accomplished individuals who compose the population, are, for the most part, the immediate descendants of the hardy men by whose courage the country was subdued, and by whose enterprise its resources were brought into operation.

This beautiful region extends to the borders of the Kentucky river, to the south of which we find a hilly region, interspersed with fertile valleys, and crossed by several rocky, elevated, and precipitous ridges. Much of the land in this district is poor; the population is thinly scattered, and many of the settlers are rough and illiterate, though independent and hospitable.

Thence proceeding to the south west we meet with the Barrens, an extensive tract of rolling land, some of which is said to be rich, though a large portion of it is certainly not of that description. It received its name from having been, when first visited by the whites, wholly destitute of timber, and covered with bushes, and from the belief entertained by those who then explored it, that it was not sufficiently fertile to produce trees. That opinion has, however, been exploded by the fact, that since the settlement of the country timber has been rapidly produced; and many parts of it are now thickly set with flourishing young forests, where not a tree was to be seen forty years ago. In some places the timber has attained a size which renders it useful to the farmer for fuel and fencing, but in general, the young trees are not tall enough to shade the road, while they are sufficiently high to prevent the circulation of the air, and in consequence, the traveler who rides through this region in sultry weather, finds the heat insufferably oppressive. This tract is nearly level, and very dry. But few springs or running streams are found upon the surface; and its general resemblance to the prairies, of which we shall treat hereafter, sufficiently shews an identity of character and origin.

Beyond the Barrens, and throughout what is termed the Green river country, the lands are timbered, and in general fertile. Some of the counties are populous and well improved; but this part of the state having been settled at a comparatively recent period, exhibits for the most part, the indications peculiar to a newly settled country.

As our plan does not admit of great minuteness of detail, we shall not pursue these descriptions through the state of Tennessee. The variety of surface and scenery is even greater here than in Kentucky. A large proportion of the territory is occupied by mountains; while another part extending to the Mississippi partakes of the alluvial character which distinguishes the borders of that river.

In attempting to describe the remarkable features of the topography of the western country, our intention is to dwell chiefly on those which are the most peculiarly characteristic. We have passed hastily over those parts which differ in appearance and in quality, from the general surface, so greatly as to form exceptions, but which yet partake of some of the attributes of the whole;

and shall proceed to speak of that broad plain which comprises the great body of the lands of the west, and which in the vastness of its extent, in the uniformity of its out line, in the singularity of its conformation, and in the unbounded fertility of its soil, stands without a rival.

CHAPTER V.

The Prairies—their Appearance.

It is perhaps not easy to account for the intense curiosity and surprise, which have been universally excited by the existence of these plains; for they have been found in various parts of the world. The steppes of Asia, the pampas of South America, and the deserts of Africa, are alike destitute of timber. But they have existed from different causes; and while one has been found too arid and sterile to give birth to vegetation, and another snow-clad and inhospitable, others exist in temperate climates and exhibit the most amazing fertility of soil. These facts show that there are various causes inimical to the growth of trees, and that the forest is not necessarily the spontaneous product of the earth, and its natural covering, wherever its surface is left uncultivated by the hand of man. The vegetable kingdom embraces an infinite variety of plants, 'from the cedar of Lebanon to the hysop that groweth on the wall;' and the plan of nature, in which there is no miscalculation, has provided that there shall be a necessary concatenation of circumstances—a proper adaptation of soil, climate, moisture—of natural and secondary causes, to produce and to protect each: just as she has assigned the wilderness to the Indian, the rich pasture to the grazing herd, and the Alps to the mountain goat.

I apprehend that the intense astonishment, with which the American pioneers first beheld a prairie, and which *we all* feel in gazing over these singularly beautiful plains, is the result of association. The adventurers who preceded us, from the champaign districts of France, have left no record of any such surprise; on the contrary, they discovered in these flowery meadows something, that reminded them of home; and their sprightly imaginations at once suggested, that nothing was wanting but the vineyard, the peasant's cottage, and the stately chateau, to render the resemblance complete. But our immediate ancestors came from lands covered with wood, and in their minds the idea of a wilderness was indissolubly connected with that of a forest. They had settled in the woods upon the shores of the Atlantic; and there their ideas of a new country had been formed. As they proceeded to the west, they found the shadows of the heavy foliage deepening upon their path, and the luxuriant forest becoming at every step more stately and intense, confirming the impression, that as they receded from civilization, the woodland must continue to accumulate the gloom of its savage and silent grandeur around them—until suddenly the glories of the prairie burst upon their enraptured gaze, with its widely extended landscape, its verdure, its flowers, its picturesque groves, and all its exquisite variety of mellow shade and sunny light.

Had our English ancestors, on the other hand, first settled upon the plains of Missouri and Illinois, and the tide of emigration was now setting towards the forests of Ohio and Kentucky, climbing the rocky barriers of the Allegheny ridge, and pouring itself down upon the wooded shores of the Atlantic, the question would not be asked, how the western plains became denuded of timber, but by what miracle of Providence, a vast region had been clothed, with so much regularity, with the most splendid and gigantic productions of nature, and preserved through whole centuries from the devastations of the frost and the fire, the hurricane and the flood. We have all remarked how simple and how rapid is the process of rearing the annual flower, or the more hardy varieties of grass, and with what ease a spot of ground may be covered with a carpet of verdure; and we know equally well how difficult it is to protect an orchard or a grove, and how numerous are the accidents which assail a tree. An expanse of natural meadow is not therefore so much an object of curiosity, as a continuous forest; the former coming rapidly to perfection, with but few enemies to assail it, the latter advancing slowly to maturity, surrounded by dangers. Hence there is, to my mind, no scene so imposing, none which awakens sensations of such admiration and solemnity, as the forest standing in its aboriginal integrity, and bearing the indisputable marks of antiquity—where we stand upon a soil composed of the vegetable mould, which can only have been produced by the undisturbed accumulation of ages, and behold around us the healthful and gigantic trees, whose immense shafts have been increasing in size for centuries, and which have stood during that whole time exposed to the lightning, the wind, and the frost, and to the depredations of the insect and the brute.

The scenery of the prairie country excites a different feeling. The novelty is striking, and never fails to cause an exclamation of surprise. The extent of the prospect is exhilarating. The outline of the landscape is sloping, and graceful. The verdure and the flowers are beautiful: and the absence of shade, and consequent appearance of a profusion of light, produces a gaiety which animates the beholder.

It is necessary to explain that these plains, although preserving a general level in respect to the whole country, are yet in themselves not *flat*, but exhibit a gracefully waving surface, swelling and sinking with an easy slope, and a full rounded outline, equally avoiding the unmeaning horizontal surface, and the interruption of abrupt or angular elevations. It is that surface which, in the expressive language of the country, is called *rolling*, and which has been said to resemble the long heavy swell of the ocean, when its waves are subsiding to rest after the agitation of a storm.

It is to be remarked also, that the prairie is almost always elevated in the centre, so that in advancing into it from either side, you see before you only the plain, with its curved outline marked upon the sky, and forming the horizon, but on reaching the highest point, you look around upon the whole of the vast scene.

The attraction of the prairie consists in its extent, its carpet of verdure and flowers, its undulating surface, its groves, and the fringe of timber by which it is surrounded. Of all these, the latter is the most expressive feature—it is that which gives character to the landscape, which imparts the shape, and marks the boundary of the plain. If the prairie be small, its greatest beauty consists in the vicinity of the surrounding margin of woodland, which resembles the shore of a lake, indented with deep vistas like bays and inlets, and throwing out long points, like capes and headlands; while occasionally these points approach so close on either hand, that the traveler passes through a narrow avenue or strait, where the shadows of the woodland fall upon his path,—and then again emerges into another prairie. Where the plain is large, the forest outline is seen in the far perspective, like the dim shore when beheld at a distance from the ocean. The eye sometimes roams over the green meadow, without discovering a tree, a shrub, or any object in the immense expanse, but the wilderness of grass and flowers; while at another time, the prospect is enlivened by the groves, which are seen interspersed like islands, or the solitary tree, which stands alone in the blooming desert.

If it be in the spring of the year, and the young grass has just covered the ground with a carpet of delicate green, and especially if the sun is rising from behind a distant swell of the plain, and glittering upon the dew-drops, no scene can be more lovely to the eye. The deer is seen grazing quietly upon the plain; the bee is on the wing; the wolf, with his tail drooped, is sneaking away to his covert with the felon tread of one who is conscious that he has disturbed the peace of nature; and the grouse feeding in flocks, or in pairs, like the domestic fowl, cover the whole surface—the males strutting and erecting their plumage like the peacock, and uttering a long, loud, mournful note, something like the cooing of the dove, but resembling still more the sound produced by passing a rough finger boldly over the surface of a tambourine. The number of these birds is astonishing. The plain is covered with them in every direction; and when they have been driven from the ground by a deep snow, I have seen thousands—or more properly tens of thousands—thickly clustered in the tops of the trees surrounding the prairie. They do not retire as the country becomes settled, but continue to lurk in the tall grass around the newly made farms; and I have sometimes seen them mingled with the domestic fowls, at a short distance from the farmer's door. They will eat, and even thrive when confined in a coop, and may undoubtedly be domesticated.

When the eye roves off from the green plain, to the groves, or points of timber, these also are found to be at this season robed in the most attractive hues. The rich undergrowth is in full bloom. The red-bud, the dog-wood, the crab-apple, the wild plum, the cherry, the wild rose, are abundant in all the rich lands; and the grape vine, though its blossom is unseen, fills the air with fragrance. The variety of the wild fruit, and flowering shrubs, is so great, and such the profusion of the blossoms with which they are bowed down, that the eye is regaled almost to satiety.

The gayety of the prairie, its embellishments, and the absence of the gloom and savage wildness of the forest, all contribute to dispel the feeling of lonesomeness, which usually creeps over the mind of the solitary traveler in the wilderness. Though he may not see a house, nor a human being, and is conscious that he is far from the habitations of men, he can scarcely divest himself of the idea that he is traveling through scenes embellished by the hand of art. The flowers, so fragile, so delicate, and so ornamental, seem to have been tastefully disposed to adorn the scene. The groves and clumps of trees appear to have been scattered over the lawn to beautify the landscape, and it is not easy to avoid that illusion of the fancy, which persuades the beholder, that such scenery has been created to gratify the refined taste of civilized man. Europeans are often reminded of the resemblance of this scenery to that of the extensive parks of noblemen, which they have been accustomed to admire, in the old world; the lawn, the avenue, the grove, the copse, which are there produced by art, are here prepared by nature; a splendid specimen of massy architecture, and the distant view of villages, are alone wanting to render the similitude complete.

In the summer, the prairie is covered with long coarse grass, which soon assumes a golden hue, and waves in the wind like a ripe harvest. Those who have not a personal knowledge of the subject, would be deceived by the accounts which are published of the height of the grass. It is seldom so tall as travelers have represented, nor does it attain its highest growth in the richest soil. In the low, wet prairies, where the substratum of clay lies near the surface, the centre or main stem of this grass, which bears the seed, acquires great thickness, and shoots up to the height of eight or nine feet, throwing out a few long coarse leaves or blades, and the traveler often finds it higher than his head as he rides through it on horseback. The plants, although numerous and standing close together, appear to grow singly and unconnected, the whole force of the vegetative power expanding itself upward. But in the rich undulating prairies, the grass is finer, with less of stalk, and a greater profusion of leaves. The roots spread and interweave so as to form a compact even sod, and the blades expand into a close thick sward, which is seldom more than eighteen inches high, and often less, until late in the season, when the seed-bearing stem shoots up.

The first coat of grass is mingled with small flowers; the violet, the bloom of the strawberry, and others of the most minute and delicate texture. As the grass increases in size, these disappear, and others, taller and more gaudy, display their brilliant colors upon the green surface, and still later a larger and coarser succession rises with the rising tide of verdure. A fanciful writer asserts that the prevalent color of the prairie flowers is, in the spring a bluish purple, in midsummer red, and in the autumn yellow. This is one of the *notions* that people get, who study nature by the fireside. The truth is, that the whole of the surface of these beautiful plains, is clad throughout the season of verdure, with every imaginable variety of color, 'from grave to gay.' It is impossible to conceive a more infinite diversity, or a richer profusion of hues, or to detect any predominating tint, except the green, which forms the beautiful ground, and relieves the exquisite brilliancy of all the others. The only changes of color observed at the different seasons, arise from the circumstance, that in the spring the flowers are small and the colors delicate; as the heat becomes more ardent a hardier race appears, the flowers attain a greater size, and the hue deepens; and still later a succession of coarser plants rise above the tall grass, throwing out larger and gaudier flowers. As the season advances from spring to midsummer, the individual flower becomes less beautiful when closely inspected, but the landscape, is far more variegated, rich, and glowing.

In the winter, the prairies present a gloomy and desolate scene. The fire has passed over them, and consumed every vegetable substance, leaving the soil bare, and the surface perfectly black. That gracefully waving outline, which was so attractive to the eye when clad in green, is now disrobed of all its ornaments; its fragrance, its notes of joy, and the graces of its landscape, have all vanished, and the bosom of the cold earth, scorched and discolored, is alone visible. The wind sighs mournfully over the black plain; but there is no object to be moved by its influence—not a tree to wave its long arms in the blast, nor a reed to bend its fragile stem—not a leaf, nor even a blade of grass to tremble in the breeze. There is nothing to be seen but the cold dead earth and the bare mound, which move not—and the traveler with a singular sensation, almost of awe, feels the blast rushing over him, while not an object visible to the eye, is seen to stir. Accustomed as the mind is to associate with the action of the wind its operation upon surrounding objects, and to see nature bowing and trembling, and the fragments of matter mounting upon the wind, as the storm passes, there is a novel effect produced on the mind of one who feels the current of air rolling heavily over him, while nothing moves around.

By those who have never seen this region, a very tolerable idea may be formed of the manner in which the prairie and forest alternate, and the proportions of each, by drawing a colored line of irregular breadth, along the edges of all the water courses laid down in the map. The border thus shaded, which would represent the woodland, would vary in width from one to five or six miles, and would sometimes extend to twelve. As the streams approach each other, these borders would approximate, or come into contact; and all the intermediate spaces, not thus colored would be prairie. It is true therefore, as a general rule, in relation to the states in which the prairies are situated, that wherever there is a considerable tract of surface, not intersected by water courses, it is level, and destitute of timber; but in the vicinity of springs and streams the country is clothed in forest.

Taking as an example the country lying between the Ohio and Mississippi rivers, it will be seen that in the point formed by their junction, the forest covers the whole ground, and that as these rivers diverge, the prairies begin to intervene. At first there is only an occasional meadow, small, and not very distinctly defined. Proceeding northward the timber is found to decrease, and the prairies to expand; yet the plains are still comparatively small, wholly unconnected with each other, and their outlines distinctly marked by the woodlands which surround and separate them. They are insulated and distinct tracts of meadow land, embosomed in the forest. Advancing further to the north, the prairie surface begins to predominate; the prairies now become large, and communicate with each other like a chain of lakes, by means of numerous avenues or vistas; still however, the traveler is surrounded by timber; his eye never loses sight of the deep green outline, throwing out its capes and headlands; though he sees no more those dense forests and large trees, whose deep shade almost appalled him in the more southern district.

Travelling onward in the same direction, the prairies continue to expand, until we find ourselves surrounded by one vast plain. In the country over which we have passed, the *forest* is interspersed with these interesting plains; *here* the *prairie* is studded with groves and copses, and the streams fringed with strips of woodland. The eye sometimes roves over an immense expanse clothed with grass, discovering no other object on which to rest, and finding no limit to its vision but the distant horizon; while more frequently it wanders from grove to grove, and from one point of woodland to another, charmed and refreshed by an endless variety of scenic beauty.

This description applies chiefly to Illinois, from a careful inspection of which state we have drawn the picture; but its general outlines are true of Indiana and Missouri, and are applicable, to some extent, to Ohio and Michigan. But if our path lie still farther to the west, and conduct us to the wide tracts that extend from the waters of the Arkansas to those of the Missouri and Mississippi, we arrive at a region of boundless plains—boundless to the eye of the traveler, which discovers nothing but the verdant carpet and the blue sky, without a grove, a tree, or a bush, to add variety to the landscape, and where the naked meadow often commences at the very margins of the streams.

When the prairie is bare, it is easy to distinguish the rich from the poorer lands, by the small hillocks which are scattered over them, and which are most abundant where the soil is least productive. They are from a few inches, to two or three feet in height, and can only, of course, exist where the clay lies near the surface; as such mounds composed of the rich mould, would soon crumble away. They have a singular appearance, and are sometimes so thickly scattered as to be inconvenient to the horseman, who attempts to ride through the high grass. The inhabitants call them *gopher hills*, under the belief that they were raised by a small quadruped of that name. I never saw a gopher—nor a man who had seen one. Col. Long, however, and his companions saw them far to the west; so that while the existence of such an animal seems to be proved, it is obvious from the fact that it is no longer seen within our settlements, that like the Indian it cannot endure the vicinity of civilized man, and has long since forsaken our borders. But I am inclined to believe that very few of the hillocks attributed to these animals are of their workmanship. In the wet prairies they are thrown up by *crawfish*, who always burrow in the clay, and not in rich or crumbling soil, that would *cave in* and mar their labor; in drier situations they have been thrown up by industrious colonies of ants, who also belong to the clay party, and make their internal improvements in the kind of earth best suited to their purpose

CHAPTER VI.

Theory of the Prairies.

The prairies afford a subject of curious inquiry to every traveler who visits these regions. Their appearance is novel and imposing, and he who beholds it for the first time experiences a sensation similar to that which fills the imagination at the first sight of the ocean. The wide and unlimited prospect calls up perceptions of the sublime and beautiful; its peculiarity awakens a train of inquisitive thought. Upon the mind of an American especially, accustomed to see new land clothed with timber, and to associate the idea of a tangled and silent forest, with that of a wilderness, the appearance of sunny plains, and a diversified landscape, untenanted by man, and unimproved by art, is singular and striking. Perhaps if our imaginations were divested of the impressions created by memory, the subject would present less difficulty; and if we could reason abstractly, it might be as easy to account for the origin of a prairie, as for that of a forest.

It is natural to suppose that the first covering of the earth would be composed of such plants as arrive at maturity in the shortest time. Annual plants would ripen, and scatter their seeds, many times, before trees and shrubs would acquire the power of reproducing their own species. In the mean time the propagation of the latter would be liable to be retarded by a variety of accidents—the frost would nip their tender stems in the winter—fire would consume, or the blast would shatter them—and the wild grazing animals would bite them off, or tread them under foot; while many of their seeds, particularly such as assume the form of nuts or fruit, would be devoured by animals. The grasses, which are propagated both by the root and by seed, are exempt from the operation of almost all these casualties. Providence has, with unerring wisdom, fitted every production of nature to sustain itself against the accidents to which it is most exposed, and has given to those plants which constitute the food of animals, a remarkable tenacity of life; so that although bitten off, and trodden, and even burned, they still retain the vital principle. That trees have a similar power of self protection, if we may so express it, is evident from their present existence in a state of nature. We only assume, that in the earliest state of being, the grasses would have the advantage, over plants less hardy, and of slower growth; and that when both are struggling together for the possession of the soil, the former would at first gain the ascendancy; although the latter, in consequence of their superior size and strength, would finally, if they should ever get possession of any portion of the soil, entirely overshadow and destroy their humble rivals.

We have no means of determining at what period the fires began to sweep over these plains, because we know not when they began to be inhabited. It is quite possible that they might have been occasionally fired by lightning previous to the introduction of that element by human agency. At all events, it is very evident that as soon as fire began to be used in this country by its inhabitants, the annual burning of the prairie must have commenced.

One of the peculiarities of this climate is the dryness of its summers and autumns. A drought often commences in August, which, with the exception of a few showers towards the close of that month, continues, with little interruption, throughout the fall season. The autumnal months are almost invariably clear, warm, and dry. The immense mass of vegetation, with which this fertile soil loads itself during the summer, is suddenly withered, and the whole earth covered with combustible materials. This is especially true of the prairies, where the grass grows from two to ten feet high, and being entirely exposed to the action of the sun and wind, dries with great rapidity. A single spark of fire, falling any where upon these plains, at such a time, instantly kindles a blaze, that spreads on every side, and continues its destructive course as long as it finds fuel.

Travelers have described these fires as sweeping with a rapidity, which renders it hazardous even to fly before them; and our children's books and school geographies are embellished with plates, representing men, horses, and wild animals, retreating at full speed, and with every mark of terror, before the devouring element. These are exaggerations. If instances of this kind of danger have ever occurred, they have been rare. We have never witnessed, or heard of such a scene. There is not an authenticated case, on record, or in tradition, in which a man or an animal has been burned by these fires, unless he was drunk or wounded. The burning of several Indians mentioned by Lewis and Clarke, was probably the result of some unusual accident, which they did not think necessary to explain. The thick sward of the prairie presents a considerable mass of fuel, and offers a barrier to the progress of the flame, not easily surmounted. The fire advances slowly, and with power. The heat is intense. The flames often extend across a wide prairie, and advance in a long line. No sight can be more sublime, than to behold at night, a stream of fire several miles in breadth, advancing across these plains, leaving behind it a black cloud of smoke, and throwing before it a vivid glare which lights up the whole landscape with the brilliancy of noonday. A roaring and cracking sound is heard like the rushing of a hurricane. The flame, which in general rises to the height of about twenty feet, is seen sinking, and darting upward in spires, precisely as the waves dash against each other, and as the spray flies up into the air; and the whole appearance is often that of a boiling and flaming sea, violently agitated. The progress of the fire is so slow, and the heat so great, that every combustible material in its course is consumed. The root of the prairie-grass alone, by some peculiar adaptation of nature, is spared; for of most other vegetables, not only is the stem destroyed, but the vital principle extinguished. Woe to the farmer, whose ripe corn fields extend into the prairie, and who has carelessly suffered the tall grass to grow in contact with his fences! The whole labor of the year is swept away in a few hours. But such accidents are comparatively unfrequent, as the preventive is simple, and easily applied. A narrow strip of bare ground prevents the fire from extending to the space beyond it. A beaten road, of the width of a single wagon track, arrests its progress. The treading of the domestic animals around the inclosures of the farmer affords often a sufficient protection, by destroying the fuel in their vicinity; and in other cases a few furrows are drawn round the field with the plough, or the wild grass is closely mowed down on the outside of the fence.

It will be readily seen, that as soon as those fires commenced, all the young timber within their range, must have been destroyed. The whole face of the country being spread out into vast plains, unbroken by hills, and but little intersected by streams, or other obstacles which might obstruct the onward career of the devouring element, the fire kindled at different places, would sweep on unchecked, until it had passed over the whole region—with a few exceptions, of which we shall now speak.

In the bottom lands, and along the margins of streams, the grass and herbage remains green until late in the autumn, in consequence of the moisture of the soil. Here the fire would stop, for want of fuel; the shrubs would thus escape from year to year, and the outer bark acquire sufficient hardness to protect the inner and more vital parts. The margins of the streams having thus become fringed with thickets, the latter, by shading the ground, would destroy the grass, and prevent the moisture of the soil from being rapidly evaporated; so that even the fallen leaves would not become dried so thoroughly, or so early in the season, as the grass of the open plains, and the fire would always afterwards find here comparatively little fuel. These thickets grow up into strips of forests, which continue to extend until they reach the high table land of the prairie; and so invariably exact is this process, that we see the timber now, not only covering all the bottom lands, and hillsides skirting the streams, but wherever a ravine or hollow extends from the low grounds up into the prairie, these are filled with young timber of more recent growth. But the moment we reach the level plain of the country, we see the evidences of a continued struggle between the forest and the prairie: at one place, where the fire has, on some occasion, burned with greater fierceness than usual, it has successfully assailed the edges of the forest, and made deep inroads, and at another, the forest has pushed long capes or points into the prairie.

Having thus stated briefly the theory which seems to us to be consistent with reason, and adduced as many facts as appear necessary to its support, we shall for the present, to avoid repetition, omit some striking proofs which will be necessarily alluded to hereafter, and proceed to exhibit some of the hypotheses advanced by others.

The flood has, of course, been cited as the grand cause of the formation of the prairies—for what phenomenon in the geological or the topographical aspect of the earth, has not been referred to some one of the great concatenation of events which attended that extraordinary exertion of omnipotence! But we do not venture to go back so far. We are satisfied with having found a sufficient explanation within a more recent period. That the great plain of the west may have been formed by the deposition of earthy particles which took place upon the subsiding of the waters, after that wonderful catastrophe, is very probable; though we doubt whether much light will ever be shed upon the subject, or whether it be practicable to ascertain any thing further in relation to that awful event, than the sacred historian has deemed it proper to disclose. It has however little to do with the growth of timber at one location, or the absence of that production at another

A writer in the American Quarterly Review, for whose judgment we entertain the most perfect respect, has suggested an explanation somewhat different from that which we have advanced. He says, "The origin of these prairies has occasioned much theory; it is to our minds very simple; they are caused by the Indian custom of annually burning the leaves and grass in autumn, which prevents the growth of any young trees. Time will thus form prairies; for some of the old trees annually perishing, and there being no undergrowth to supply their place, they become thinner every year; and as they diminish they shade the grass less, which therefore grows more luxuriantly, and when a strong wind carries a fire through the dried grass and leaves which cover the earth with combustible matter several feet deep, the volume of flame destroys all before it; the very animals cannot escape.

We have seen it enwrap a forest upon which it was precipitated, and destroy whole acres of trees. After a beginning is made, the circle widens every year, until prairies open as boundless as the ocean. Young growth follows the American settlement, since the settler keeps off those annual burnings. Another proof of our theory is, that prairies are all upon rich, rolling, and comparatively dry, soil, where much vegetable matter would accumulate to raise the flame, and but little moisture to counteract it."

This writer differs from us, in supposing that the forest has been destroyed by the action of fire, while we imagine that its production has been prevented by that cause. We deny that there is any proof of fires in the woods having been so extensive, or so destructive as he supposes. The destruction of growing timber by fire is not a common occurrence, though we do not question that the writer has witnessed it under the circumstances which he states. The fact is undeniable, that in those countries where woodland and prairie are found adjacent, the fire ceases to display the same destructive energy in the former, that it exhibits in the latter. The edges of the prairie do not exhibit appearances of encroachment by fire on the timber; on the contrary the woodland seems to be increasing, and it is much more common to see young thickets spreading out from the woods upon the plain, than to behold the stumps and trunks of trees which had been killed by fire. But a conclusive argument is, that the destruction of the forest by fire, for which the writer contends, would have taken place on the hills, and on broken grounds, as well as on the level, while the prairie only occupies the latter.

In the very interesting narrative of Long's First Expedition to the west, we find a statement similar to that which we have quoted, though advanced with less confidence. "The lands immediately in the rear of St. Louis, between the Mississippi and the Missouri, below their junction, have an undulated surface, and a deep alluvial soil. Since their occupation by permanent inhabitants, the yearly ravages of the fire have been prevented, and a dense growth of oaks and elms has sprung up."

"In this fact we have a satisfactory explanation of the cause of the present want of forest trees in extensive tracts on the Missouri, which appear, in every respect, adapted to the growth of timber. *If these lands*, called prairies, *were at any former period covered with forests*, it may easily be supposed, the yearly devastations of fires breaking out in dry seasons, would destroy many of the trees. The forests being thus broken, the growth of grass and annual plants would be greatly facilitated by the nakedness of the soil, and the free admission of the rays of the sun. Forests attract rain, and impede evaporation, while the reverberation from the surface of vast plains and deserts, tends to dissipate the clouds and vapors which are driven over them by the winds. In fertile districts like the alluvial lands of the Missouri and Mississippi, a heavy annual growth of herbaceous plants is produced, which, after the autumnal frosts, becomes dry and peculiarly adapted to facilitate and extend the ravages of fire. In a country occupied by hunters, who are kindling their camp fires in every part of the forest, and who often like the Mongalls in the grassy deserts of Asia, set fire to the plains, in order to attract herbivorous animals, by the growth of tender and nutritious herbage which springs up soon after the burning, it is easy to see these annual conflagrations could not fail to happen."

"In the Autumn of 1819 the burnings, owing to the unusual drought, continued until very late in the season, so that the weeds in the low grounds were consumed, to the manifest injury of the forests. Large bodies of timber are so frequently destroyed in this way, that the appearance has become familiar to hunters and travelers, and has received the name of *deadening*."

To this statement, taken altogether, we have no objection, as it does not differ materially from our own views. *If* the plains,—as the author cautiously suggests, were at any former period covered with forest, there is no other agent than fire, by means of which they could have become denuded. And the admission, in the latter part of the quotation, that an *unusual* drought, continuing late in the season, is necessary to carry the fire into the low grounds, and render it injurious to the forests, is all that we could ask, to shew that these are exceptions, whose occasional occurrence could not produce an effect so invariable, as the non-existence of timber on the plains of the west.

Major Stoddard, in his Sketches of Louisiana, holds the following language: "The prairies are covered with grass. These were probably occasioned by the ravages of fire; because whenever copses of trees are found on them, the ground about them is low, and too moist to admit the fire to pass over it."

An opinion differing from all these is expressed by the enterprising traveler, Pike, who in speaking of the prairies attributes their destitution of timber, to a deficiency of moisture in the soil and climate. "I therefore consider,' says he, "that this country never was timbered, as from the earliest ages, the aridity of the soil, having so few water courses running through it, and they being principally dry in summer, has never afforded moisture sufficient to support the growth of timber." This argument might apply, with sufficient plausibility, to the deserts of Arabia, and to the sand plains lying east of the Rocky mountains, where there is not enough of moisture to afford nourishment to *any* vegetation; but the character of our prairies is not that of barrenness. The plain of the Mississippi is dry, but not *so arid* as to be incapable of supporting vegetable life. The luxuriance of the wild growth, and the admirable adaptation of the soil to the purposes of husbandry, afford conclusive evidence that although the surface be parched, there is some process by which nature affords an ample supply of moisture: and this is probably by the ascension of water by capillary attraction, through the porous substrata, from the subterranean currents, which are known to be abundant, and to lie near the surface. General Pike wrote before any part of the prairie region was settled by the American people, when but little of it had been explored, and when the facts to which we have alluded in support of our views, had not been ascertained.

It has been suggested that the prairies were caused by hurricanes, which had blown down the timber, and left it in a condition to be consumed by fire, after it was dried by lying on the ground. A single glance at the immense region in which the prairie surface predominates, must refute this idea. Hurricanes are quite limited in their sphere of action. Although they sometimes extend for many miles in length, their track is always narrow, and often but a few hundred yards in breadth. And it is a well known fact, that wherever the timber has been thus prostrated, a dense and tangled thicket shoots up immediately, and protected by the fallen trees, grows with uncommon vigor.

Some have imagined that our prairies have been lakes; but this hypothesis is not tenable. If the whole state of Illinois is imagined to have been one lake, it ought to be shewn that it has a general concavity of surface. But so far from this being true, the contrary is the fact: the highest parts of the state are in its centre. If we suppose, as some assert, that each prairie was once a lake, we are met by the same objection; as a general rule, the prairies are highest in the middle, and have a gradual declivity towards the sides; and when we reach the timber, instead of finding banks corresponding with the shores of a lake, we almost invariably discover valleys, ravines, and water courses, considerably depressed below the general level of the plain. Nor does the circumstance of ponds being found in the middle of prairies, disprove the assertion that they are convex, and highest in the centre, as is suggested by one of our writers, any more than depressions on the surface of the globe, prove that it is not round. There cannot be the least ground for a doubt, that, as a general rule, the prairie surface is slightly, but decidedly, convex.

Wherever hills are found rising above the common plane of the country, they are clothed with timber; and the same fact is true of all broken lands. This affords additional evidence in support of our theory. Most of the land in such situations is poor; the grass would be short, and if it burned at all, would occasion but little heat. In some places the progress of the fire would be checked by rocks and ravines; and in no case would there be that accumulation of dry material which is found on the fertile plain, nor that broad unbroken surface, and free exposure, which are required to afford full scope to the devouring element.

There are other facts, too well known to admit of dispute, which strongly corroborate these views. It is undeniable, that from the first settlement of the western prairies, the timber has been rapidly increasing; and from the best information that we can get on the subject, it is pretty certain, that it spreads in a proportion at least equal to the increase of population. Although thousands of acres of woodland are annually cleared, it is unquestionably true, that the quantity of timber in the whole region in which prairies are embraced, is increasing with every year. Wherever a prairie, of but few miles in extent, is entirely surrounded by the farms which occupy the adjoining woodland, it is found that the wild grass is quickly succeeded by a growth of weeds, and that these in turn give place to bushes. The operation is simple, We have already shown, that the growth of timber is only prevented by the annual fires; and it is easily seen that where a portion of the prairie is insulated, as above described, the precautions used by the farmers, to defend their own property from the devouring element, will also protect that portion of the prairie which is thus detached from the main body. The large herds of domestic cattle, also, which run at large in the new settlements, contribute to this process, by keeping down the luxuriance of the natural grass, so as to leave but little fuel for the fire, even in places exposed to its approach. It is therefore a common observation, that around all the farms, the prairie has given, or is giving way, to thickets. In the oldest counties, where settlements have existed for twenty or thirty years, forests of excellent timber are now shown, of several miles in extent, the whole of which has grown up within the memory of the inhabitants. So rapid, and so certain, is this process, that we may state the fact as undeniable, that wherever the soil is protected from the action of the fire, timber will grow spontaneously, which, in from sixteen to twenty years, will be fit to be used for fuel, fencing, and many other purposes.

An instance of the facility with which the soil, when protected from fire becomes covered with timber, occurred under the notice of the writer. An individual had enclosed a single field in the prairie, in which corn was cultivated for several years, when it was abandoned, and the rails which composed the fence carried away. In the mean while the corners of the fence, and a narrow strip on each side of it, having been protected from the fire on the one hand, and the plough on the other, grew up in bushes. After the field was deserted, this natural hedge remained for years, and still remains; having grown up into a row of tall trees, occupying the former line of the fence, while the interior of the square became also covered with brushwood; and thus a grove has been formed which bids defiance to the fire.

It will be remembered that we have maintained that the earth was covered with grass, antecedently to the growth of trees. We admitted that on the margins of streams, upon mountains, and on broken grounds,—wherever, in short, the progress of the autumnal fires should be intercepted, either by the conformation, or the moisture, of the surface, timber would rapidly cover the ground, while at the same time we contended, that in the open plains grass would long continue to hold possession. We have given ample proof of the correctness of this theory, in reference to our western prairies; and we shall now show that it is probably true of other parts of the United States.

In the "Memoirs of the Historical Society of Pennsylvania," we find an article entitled "Sketches of the early history of Byberry in the county of Philadelphia, by Isaac Comly," a worthy member of the Society of Friends, and a descendant of the companions of Penn. Byberry township lies in the north east end of the county of Philadelphia, distant from the city between thirteen and sixteen miles. The account is compiled from the most authentic sources, and reaches back to the first settlement of the country. The writer says, "Byberry was settled early after the arrival of William Penn. When the white people first came here, we are informed they *found but few large trees* standing, though *plenty of saplings and underbrush;* and in some places, particularly in Mooreland, the ground was *covered with coarse grass*, as high as a man's head." This is a very striking passage. It seems, that there were prairies in Philadelphia county! and that *the ground was covered with coarse grass that grew as high as a man's head*, answering precisely to the description of the prairie grass of the West. Other spots were destitute of large trees, but produced "plenty of saplings and underbrush,"—being in the state intermediate between prairie and forest, and thus affording the strongest proof of the change which the country had then recently undergone.

In another volume of the transactions of the same society, we have "An account of the first settlement of the townships of Buckingham and Solesbury, in Bucks county, Pennsylvania, by Dr. Joseph Watson,"—a gentleman who died some few years ago, at an advanced age, and whose own recollections, with the accounts transmitted to him by his father and grandfather, the latter of whom came out with William Penn, supplied him with the most authentic information. Speaking of the employments of the first settlers, he says, "they cut grass in the plains, or swamps, often at several miles from home, stacked it up on the spot, and hauled it home in the winter." The counties of Bucks and Philadelphia, lie adjoining, if we mistake not, and occupy an extensive undulating plain on the margin of the Delaware; and we think that the evidence of the two writers, who state the facts above quoted, incidentally, without any view to the support of a theory, sufficiently proves the former existence of prairies in that region; while their non-existence within the memory of the present inhabitants, shews also the rapidity with which, after settlements are made, timber will cover the interjacent plains.

The first settlers of Kentucky found large tracts of the country destitute of trees, and covered with bushes. Supposing that the want of timber was caused by the sterility of the soil, or some other circumstance unfriendly to vegetation, they gave to these spots, the expressive name of "the barrens," and carefully avoided them in making their selections of land. The *barrens*, were extensive plains, interspersed with hill and dale—not so level as the prairies, north and west of the Ohio, yet not broken by deep ravines, or abrupt ridges. It was soon discovered that the bushes were growing up into thrifty saplings;

and on farther examination the soil was found to be of good quality. The country was soon occupied, and now contains a large population; while forests of valuable timber are growing upon the soil, over which, within the memory of living witnesses, the hunter could see the deer bounding over the brush, as far as the eye could reach.

Trumbull in his "History of Connecticut," a work compiled with great care and labor, from the most authentic sources, speaks in various places of the practice of the early settlers, of cutting hay *from the wild meadows*: a phraseology which distinctly asserts the existence of plains, covered with grass, and destitute of timber. He also describes these natural meadows, and gives his own inferences as to their formation. He says,

"When the English became first acquainted with that tract, comprised within the settled part of Connecticut, it was a vast wilderness. There were no pleasant fields, nor gardens, no public roads, nor cleared plats. Except in places *where the timber had been destroyed, and its growth prevented by frequent fires*, the groves were thick and lofty. The Indians so often burned the country, to take deer and other wild game, that in many of the plain dry parts of it, there was but little small timber. Where the lands were thus burned, there grew bent grass, or, as some called it, thatch, two, three, and four feet high, according to the strength of the land. This, with other combustible matter which the fields and groves produced, when dry in the spring and fall, burned with violence and killed all the small trees. The large ones escaped, and generally grew to a notable height and magnitude. In this manner the natives so thinned the groves, that they were able to plant their corn and obtain a crop."

This statement is undoubtedly accurate so far as the author has related the facts which came down to him; while so much as is the result of his own attempt at explanation is fallacious. There were *plains*, which were annually *burned*, on which *grass grew*, and where the Indians *raised corn*. But corn never grew under the shade of large trees of "notable" growth. Whatever might have been true of other places, the spots on which the grass grew four feet high, and where corn was cultivated, must have been entirely exposed to the action of the sun.

Captain Smith, on the contrary, found the whole of Virginia covered with timber, and is careful to record that he saw no plains, "but only where the Salvages inhabit, but all overgrown with trees and weeds, being a plaine wildernesse as God first made it."

Captain Owen, of the British navy, in a late voyage to the coast of Africa, of which an interesting account has been published, describes a large tract of the interior which he explored, as "a low level country, with some knots of trees, like park land;" and from other allusions in the same book, we suppose that he often met with extensive plains of wild meadow, precisely similar to those of Illinois and Missouri. The fact may pass for what it is worth. We adduce it for the purpose of shewing that there is nothing in the character of our prairies so anomalous, or so contrary to the laws of nature, as is supposed by those who have been accustomed to see wild lands clothed with timber.

CHAPTER VII.

Soil of the Prairies—Explanations in regard to the want of timber.

Fanciful writers have divided the prairies into *alluvial* and *rolling;* but no such distinction exists in point of fact, or is tenable according to any received theory, or scientific deduction. The formation of the whole is so invariable in character, as to render it certain, that if any part is alluvial, the whole is equally so, nor do those plains which are rolling, as nearly all are, differ in soil from the remainder, so as to justify this sort of classification. The probability is that the whole western plain is *diluvial,* with the exception only of the bottom lands on the margins of rivers, which are *alluvial*, and of recent formation.

The levelness of the surface, the absence of stones, the light quality of the loam, with other indications, seem to establish the fact, that this vast plain is composed of the sediment, deposited at the universal deluge. Marine shells have been found in our prairies; at one place particularly, an immense mass of oyster shells lie deposited not far below the surface. Logs have been discovered, buried thirty or forty feet deep. Boulders, or detached masses of stone, are occasionally seen on the prairies, lying loosely on the ground, not only entirely separate from the limestone pan beneath, but differing from it in kind. They are obviously not meteoric; and it seems that they have been wrenched from their native beds, and brought to the places where they are now seen, by some great convulsion of nature. They are granite, and there is no spot at which that description of rock exists, and from which they could have been brought, nearer than the Allegheny, or the Rocky mountains, or the northern shores of the lakes. Yet they are numerously scattered throughout Illinois and Missouri.

The great cause of the amazing fertility of the soil of new countries, is, the accumulation of decayed vegetable matter upon the surface. The leaves and grass, and other annual productions, which decay in the autumn, cover the ground every year with a new coat, of the most fertilizing quality. The boughs which are continually falling, the bark, of which most trees throw off a portion annually, and the trees themselves, which are torn up by tempests, or die of old age, form altogether an inexhaustible store, which continually rotting and adding to the soil, is as continually receiving and preparing new supplies. The plains as well as the woodland, are thus enriched. The annual burning of the prairies, may interfere to a considerable extent with this arrangement, but it does not defeat it; for although the fall of the leaf occurs emphatically and poetically in the autumn, it is not confined exclusively to that season. On the contrary, every vegetable is constantly throwing off a portion of its substance, and throughout the whole season of vegetation, the soil is daily gaining something, by deposit; even the ashes left by the autumnal fires, are not without their value. However thin the coat may be, which is spread over the earth in one year, and how trifling soever it may seem to us, yet, when we reflect that this process has been going on for ages, it is easy to see that the accumulation must, in the aggregate, be important. Nor can we in any other rational manner, explain the reason of the difference between new lands, and those which have been exhausted by cultivation. The one is continually losing by exposure to the sun and atmosphere, while its products are carried away by man; the contrary is true of the other, and the farmer who manures his land, only resorts to a simple operation of nature.

The decomposed vegetable matter, when completely rotted, forms a light black mould, which is the very richest and best manure in the world; and which, if used simply as such, would be prized by the European farmer, above every other substance, which is usually applied to that purpose. A soil of unrivalled fertility is thus formed, extending throughout the whole country, but differing in depth, according to circumstances. The light particles, of which it is composed, are easily washed by rains, from the higher into the lower grounds. The valleys thus receive new supplies, in addition to that which their own vegetation affords, while the hills only retain the small portions which may be intercepted by the grass or fibrous roots, or by other accidental causes. On the low grounds, therefore, the stratum of mould has been found to be, in some instances, twelve feet deep; while on the hills, it is seldom more than a few inches. This process can, of course, only prevail in the hilly and timbered regions, to any extent; and it is thus that those rich bottoms are created, which margin all the streams, and those fertile valleys, which astonish every beholder with the rankness and beauty of the vegetation that covers them. A different operation obtains upon the prairie, whose level surface is not washed by rains. Here the accumulation is continual, though slow; all that is gained is kept; and the diluvian plain is covered with a rich vegetable mould, which is always increasing in depth.

It has been remarked, and there is no doubt of the fact, that the highest points of the prairie are invariably the richest; a circumstance which cannot be readily accounted for, unless we suppose that these lands are diluvial, and that those spots would be richest, at which the largest masses of diluvium were accumulated. It is easy to imagine the varieties which must occur, on these principles, between the extremes which we have suggested. The exceptions are numerous and depend chiefly on the quality of the subsoil; if too porous it absorbs the fertilizing juices; if impervious to water, it retains too large a proportion of that element on the surface, and forms what are called wet prairies.

Having thrown out these hints, it is only necessary to add, briefly, that the soil is a rich black mould, containing an admixture of fine silicious sand. It is supposed to contain a portion of decomposed limestone, and is warm, quick, and lively. Its depth is as remarkable as its wonderful productiveness.

We pass now to some points of immediate practical importance to the agricultural population of our valley, which have not been understood abroad. When the eye of the experienced farmer, roves for the first time over the prairies of the west, he is struck with the dreariness of the prospect. That which is beautiful and picturesque to another, conveys no corresponding sensations to the mind of one who views it simply in relation to its capacity for the support of man, and the business of life. The absence of timber, seems to him an evil without remedy, and in his judgment millions of acres appear destined to bloom in eternal wilderness. So obvious is this view of the case, that we frequently hear the remark, from judicious men, that but for the want of timber, the advantages of Illinois and Missouri, as agricultural states, would stand unrivalled. An attentive examination of this question in all its bearings, will shew that this conclusion is fallacious, and that in fact, the supply of this indispensable article, is as abundant at this time, as its future increase in quantity is certain.

We have explained the manner in which the forest and prairie are interspersed throughout our country, and have shown that the former is found skirting the shores of all our rivers, and smaller water courses. Such are the situations, as regards locality, in which the first inhabitants always choose to settle, for the purpose of enjoying the united advantages of wood and water; and the vicinity of navigable streams holds out other strong inducements.

The open prairies, or those parts of the country which are now destitute of timber, being invariably the most distant from living streams, would of course, as a general rule, be the last to be settled, even if all the surface was alike covered with wood. Such has been the actual process of settlement. The margins of the large rivers were first settled, the inhabitants tenaciously adhering to the rich bottom lands, in spite of their dampness and insalubrity, and in defiance of the immense masses of heavy timber, which rendered the clearing of those lands a gigantic labor. More recently the prairie lands have acquired reputation, and the emigration has flowed towards the interior parts of the new states. But the settler, in forsaking the margins of the large rivers, pursues the meanders of the smaller streams, and selects his farm on the edge of a prairie, where he may enjoy the combined advantages of timber and plain.

For the present population, the quantity of timber is amply sufficient; and so small a portion of the timbered lands is yet occupied, as to justify the assertion that enough remains to supply all the inhabitants which these states may be reasonably expected to contain for the next half century. There are exceptions to these statements: instances in which settlements have spread over an entire prairie, and artificial means have been adopted for supplying the want of wood; but we shall show presently, that these cases go to prove the correctness of our views. We assume the positions, that at present the settlements are generally confined to the woodlands and adjoining prairies, where is found an abundant supply of timber; and that a very small proportion, in comparison to the whole of the timbered lands, is thus occupied. The remainder stands open to new settlers, while nature has made ample provision for future generations.

We have seen, moreover, that as the country becomes settled, the timber rapidly increases. We need not add to what we have said on this point. We think that we have shown conclusively that there have been numberless instances in this, and other parts of our continent, in which forests have grown up, within the memory of man, without the aid of any effort of human ingenuity; and we can imagine no reason why the same process should not continue to be carried forward. On the contrary, we have seen this munificent operation of nature proceeding regularly through a long series of years; and as we believe it to be the result of those immutable laws of nature, which pervade all ages and countries, we have no right to suppose that the future will not resemble the past. A careful examination of the subject must convince any rational mind, that there will always, during the whole process of the settlement of this wide region, be land enough reclaimed from prairie, and covered with timber, within each generation of inhabitants, to supply the increase of population which may have occurred during that time, until the whole country shall be thus supplied with a due proportion of wood.

But we are met here with another consideration, which is worthy of notice. The question arises, whether the race of farmers, now rising up in our country, will require timber in as large quantities as their predecessors. We reply that they certainly will not. Whenever an article is abundant, it will be used with profusion; when scarce, economy will be practiced in its consumption. American farmers have been accustomed to reside in the vicinity, or in the bosom of immense forests, and to enjoy the use of wood without stint. Not only has it been unnecessary to economise in this article; but every where in the United States, except latterly in a few districts, the *destruction* of timber has been a desirable object, and has constituted an unavoidable and laborious part of the business of the husbandman. Wood has therefore been used with prodigality, for all the purposes to which it is necessarily applied; while it has also been substituted in numberless instances, for substances which, under other circumstances, would have been more suitable. Not to speak of wooden houses, bridges, and *roads*—of wood for fuel and fencing—we find it adopted in the west for purposes more anomalous, where wooden pins are substituted for nails, and wells are curbed with hollow logs, where the cabin door swinging on wooden hinges, is fastened with a wooden latch, and the smoke escapes through a wooden chimney. Engineers have proposed to substitute wood-work for masonry in the construction of railways and canal locks; and it is said that an eminent lawyer in Missouri, had a very convenient office, made of a single section sawed from a hollow sycamore. Well may ours be called a *wooden country;* not merely from the extent of its forests, but because in common use wood has been substituted for a number of the most necessary and common articles—such as stone, iron, and even leather. Whenever, therefore, timber shall cease to be cheaper than the substances which might be used in its place, the demand for it will be proportionably diminished.

There is still another view of this question, which is important. That which appears to the superficial observer as a defect, is, in truth, one of the greatest sources of the prosperity of our country. The labor of clearing woodland, is the most arduous task to which the western farmer is subjected, and has constituted in itself, the greatest drawback to the rapid growth of the new states. Where the soil is rich, the timber is generally heavy; and a lifetime is consumed in opening a farm. No one but a backwoodsman, accustomed to dwell in forests, to wield the axe, and to depend mainly upon his rifle for subsistence, is fitted for this herculean enterprise; when undertaken by the husbandman from the eastern states, it has scarcely ever failed to produce the most disastrous consequences: bankruptcy, disease, disappointment, and death, have traced his footsteps, and poisoned his enjoyments. If the farmer is not sufficiently wealthy to hire laborers, a few acres only are annually reclaimed from the forest; and even this is effected by the most laborious and painful drudgery. Years are consumed, and the industrious settler, sees the prime of his manhood wasted, before he begins to reap the fruit of his labors. If the same operation is attempted to be performed by hired labor, the expense of clearing exceeds the value of the land when cleared; while the stumps of the trees remain for many years, occupying a large portion of the ground, and greatly impeding the business of husbandry. In the mean while, nothing is added to the industry or trade of the country, because those who are engaged in clearing lands can make no produce for market.

Nor is this all. The clearing of new lands, has always been found to be productive of diseases of the most malignant character. The settler builds his cabin in the gloom of dense shadows. The vegetable deposit of ages is suddenly exposed to the glaring beams of the sun. Thousands of trees are levelled—large portions of which are left to rot on the ground. The air is filled with noxious exhalations; and bilious fevers are the consequence.

Far different is the case in our open country. The settler may always select, upon our prairies, land as fertile as the richest river bottoms; and by settling in the edge of the timber, combine every advantage afforded by the latter. He finds the land already cleared, and has only to enclose it. The labor of bringing it into culture is comparatively trifling. A heavy plough and a strong team is required the first year, to turn over the sod. The corn is dropped in the furrows, and covered with a hoe, and no other labor is bestowed upon it until it is fit to gather; because during that year the crop cannot be tended in the ordinary way, as the sod, already bound together by the fibrous roots of the grass, is merely turned over, and not pulverized so as to admit of tillage. But by turning the grass down, exposing the roots to the sun, and leaving the sod undisturbed, it becomes mellowed in one season, and while undergoing the process of decomposition affords nourishment to the growing corn. The crop thus raised is not abundant, nor the grain very good; but something like half the ordinary crop is raised, which amply pays for the labor of planting and gathering. By the ensuing spring, the roots of the wild grass, are found to be completely rotted, and the plough is put into a rich, light mould, fit for all the purposes of husbandry. The ordinary operations of farming may now be conducted in the usual way; and the labor of cultivating a light soil, unincumbered with rocks and stumps, is so trifling as to leave time for the farmer to improve his land and buildings. The plough runs on a level plain of rich mould, and may be managed by a half-grown boy, as well as by the strongest ploughman. In timber lands, newly cleared, ploughing requires both strength and skill; the plough must be sharpened frequently, and is often broken; and at last the work goes on slowly. The difference in the greater facility of working prairie lands; the saving in the wear of all implements of husbandry; the economy of time, and of course the greater degree of certainty in the farmer's calculations; the enjoyment of health—are so great, as in our opinion, to outweigh any inconvenience which can possibly be experienced in this country for the want of timber, even under the most unfavorable circumstances. A farmer had better settle in the midst of a prairie, and haul his fuel and rails *five miles*, than undertake to clear a farm in the forest. The farmers of Illinois are beginning to be aware of this fact; and there are now many instances in which farmers, having purchased a small piece of land for timber, in the woodland, make their farms at a distance in the prairie. It is only necessary to make a nice calculation of the time consumed in the *transportation* of wood for fuel and all other purposes and to observe how small a proportion it bears to the other labors of a farm, in order to satisfy any one who is acquainted with the subject, that it is really a matter of no importance, when brought into competition with the advantages of a prairie country.

It is to be recollected, that the prodigal consumption of timber, which we now witness, will, in all probability, be diminishing annually, with the improvement of the country, and the introduction of a variety of substitutes for wood. People will not forever make worm fences, live in log cabins, and warm themselves by log-heaps built up in great wooden chimnies, which occupy nearly the whole gable end of a house. In an open champaigne country, it is not possible that the planting of hedges can be long delayed. If they can be used with advantage in any country, they certainly will succeed in ours. The climate is well adapted to the English white thorn; and we have several indigenous thorns which are admirably suited to the purpose. The conformation of the country, and its fertility, renders it easy to plant, to cultivate, to protect, and to perpetuate the hedge; and every circumstance combines to recommend this mode of enclosure. In the greater part of the prairie region, building stone cannot be had; but in such places, brick may always be substituted by those who wish to build good houses. The stratum of clay which is found under our soil, is well suited for brick-making, and in most places can be obtained, by removing the light covering of loam which forms the surface. As for fuel, there is no difficulty. No part of this country has been explored, in which coal does not abound; that is to say, there is no extensive district without it; it is found in the broken lands, and bluff banks of all our larger water courses, and though seldom met with within the area of a prairie, it abounds on the borders of all the streams which meander among these plains. That it has not been brought into use, at all, is a proof of what we have asserted, viz. that wood is abundant. Whenever the farmer shall discover that his forest trees have become sufficiently valuable to be worth preserving, he will have recourse to those inexhaustible stores of fuel which Nature has treasured up in the bowels of the earth; his fields will be enclosed with hedges; the axe will cease its wanton devastation; the demand for timber, and the quantity, will regulate each other; and men will learn to believe the obvious truth, that there never need be a scarcity of that, which can be preserved by care, and produced by industry.

CHAPTER VIII.

The Prairies—their destitution of water explained.

In a practical point of view the absence of water is also a serious objection to the prairie region. No spring bursts out upon these plains. This is a truism; for wherever a stream, however small, trickles over the surface, the soil thus moistened becomes covered with timber. The prairie, therefore, is precisely that part of the whole country, which is destitute of living streams upon its surface. And when it is recollected that the greater part of Illinois, Missouri, and the territory lying north, west, and south of these states, is prairie, over which the eye of the traveler may rove for miles, without discovering a shrub or tree, it will be readily seen that the absence of water must be great.

It is true, that there is a dearth of water upon the surface. In the summer especially, the traveler may ride a whole day without finding a rivulet, or even a standing pool at which he may water his horse; and those who traverse the unsettled parts of the country, complain of this as one of the greatest inconveniences of the journey. On the other hand, it is a fact equally well ascertained, that water is every where found, in great abundance, at a distance of a few feet below the surface. We have known but a very few spots at which water could not be procured by digging; there are few countries in which the sinking of wells is performed with so much ease, or with such uniform success. There is, in general, no rock to perforate; after removing the rich soil, a stratum of hard clay presents itself, then gravel, and then another layer of clay, all of which are so compact as to require no *curbing*, during the progress of the operation. The water is found in a stratum of fine clean sand. The depth of the wells varies from twelve to forty feet, but most usually is from eighteen to twenty-five; it very seldom varies much from twenty feet.

There is therefore, in fact, no dearth of water. It is present in great abundance, but not in the position most desirable to the farmer, who, if settled at a distance from the woodland, must adopt some artificial mode of supplying his stock, with this indispensable article. At present this want is not felt as an existing evil; and we think it will not become a subject of complaint for many years, for the same reason which we suggested in relation to timber. The present inhabitants of the prairie region, are settled in situations amply supplied with water, and there is still a great abundance of choice land remaining vacant, on the margins of the rivers and smaller water courses, to accommodate several generations of new settlers. It is worthy of remark also, that the practice of suffering cattle and other stock to roam at large over the natural pastures, which now prevails universally, and must long continue to be pursued, renders this rather an imaginary want, than one of practical inconvenience.

The family is supplied, either by a spring or well, with a sufficient quantity of good water for household purposes, and for work-horses; while the animals which seek their own food on the wild lands, roam off to the streams which are more or less distant. But the open prairie lands possess some advantages, which will go far towards counterbalancing this deficiency. These, as we have remarked, are their great fertility, the ease with which they may be brought into cultivation, and the lightness of the soil, which renders the tillage less laborious than that of other lands. To these may be added, the facility of making good roads, in consequence of the levelness of the country, and the dryness of the soil,—and the remarkable adaptation of this whole region for internal communication by railroads and canals.

A great mistake has been made by travelers, and adopted by the compilers of books, in reference to *wet prairies*, which they suppose to exist to a much greater extent than is true. Taking it for granted that the prairie region is a vast plain, they infer *prima facie*, that the water which falls from the clouds, is slowly drained off, and remains long on the ground, constituting extensive pools and marshes. But the truth is, that the surface is undulating, and that the process of draining has, in the lapse of ages, gradually worn down the edges of the plains nearest to the water-courses, so that the centre is in most cases the highest. This conformation is not invariable: there are prairies which are level, and upon others, even the most elevated, will be found depressions, from which the water is not drained. Taking into view these *exceptions* to the general rule, and considering them as characteristic features in the topography of the country, a writer, otherwise accurate, has said that "most of our large prairies are so nearly level, or slightly concave *in the centre*, as to render many places wet, and others inundated." A country of which this remark should be true would be scarcely habitable. As well might the writer deny the convexity of the globe, because there are valleys upon its surface, as to deny the same general shape to the prairies, because in the almost imperceptible undulations of their outline, the latter sometimes assumes for a short distance the appearance of an exact plane, and sometimes sinks into a hollow. The idea is contrary to the analogy of nature, for the natural drainage of a country, will leave those parts most elevated which lie at the greatest distance from the rivers or valleys into which the rains flow off from the surface. In a region of rock formation, this effect will be modified by other causes; but on plains of light soil, resting on clay and gravel easily worn by the attrition of water, its operation is obvious and uniform.

In the spring of the year, or at any other season when rain has fallen copiously, the light and porous soil of the prairie becomes saturated with water, and as the process of draining cannot be carried forward rapidly, in a country so *nearly* level, the whole land seems almost inundated. The slope of the entire plain of the west, has been shown to be gentle; the channels of its rivers have but little declination, and carry off their waters slowly. The smaller water courses, by the same law, have but little fall; they are therefore soon filled to overflowing. Creeks assume the appearance of rivers—brooks are filled to their brinks—the ravines in the prairies, dry at other seasons, become the channels of immense floods, which slowly flow off with an almost imperceptible motion. The whole land is like a saturated sponge. But whenever the waters subside, the porousness of the soil, and the rapidity of the evaporation in so open a country, produce the effect of drying the soil with remarkable celerity.

The objection to the prairie region, is not excess of moisture either in the soil or climate; the opposite, if it be an objection, is that which might be alledged with more propriety. It is a country of boundless plains, accessible to the winds from every direction—but little shaded by timber—and having a small proportion of springs or running streams of water. Early in the summer all the streams except the largest, are dried up; the traveler is astonished as he passes over deep channels, perfectly dry, to see, by the marks of water above his head, that immense floods have recently filled them to overflowing, and at finding in the beds of rivers of sounding name, in which for months together a ship of the line might float, rivulets almost exhausted, over which he could jump at a single bound.

Wet prairies occur where the surface of the plain is perfectly level, or slightly concave. A very small proportion of the whole country is comprised within this description; and all of it may be easily drained. We have scarcely ever seen a prairie from which the standing water might not be conveyed by a ditch a few feet in depth. They are not sufficiently extensive to produce any effect upon the atmosphere; and as the waters are rapidly evaporated, they become dry in the early part of the summer, and are covered like the other lands with grass; so that they do not generate miasma in any quantity which can perceptibly effect the salubrity of the air.

The quality of the water in the interior, or prairie region, is often made a subject of complaint by travelers. The reason is obvious. The first settlers in a new country, and those who keep the houses of entertainment at which travelers stop, are persons who care little for the luxuries of life, and who have been accustomed to the use of spring water. They know little, and care less, about the art of procuring the pure element by means of artificial wells. When obliged to resort to this method of getting water, they consider it a matter of importance to find it as near the surface as possible, or rather, if they do not find it after digging a few feet, they desist and seek it at another spot; and choice of a place at which to reside, depends on the finding of water at the depth of twelve or fifteen feet. The well is often so shallow that the water may be warmed by the action of the sun. It is curbed with green wood, from which sometimes the bark is not removed—or more frequently with a hollow log termed a *gum*—which is constantly decaying and imparting a bad taste to the water; while no pains are taken to remove the leaves and woody fibre which are continually falling into it. When wells are properly dug, and walled with stone or brick, the water is generally pure and excellent; nor can we conceive how it could be otherwise, passing, as it almost invariably does, through a stratum of fine clean sand.

CHAPTER IX.

Wild Animals.

There are several works on natural history, which accurately describe the animals of this region. In ornithology especially, the labors of Wilson, Nuttal, and Buonaparte, have left no room for additional remarks. We shall confine ourselves to a few desultory hints relating to the settled parts of the country.

The buffalo has entirely left the inhabited districts. Before the country was settled our immense prairies afforded pasturage to large herds of this animal; and the traces of them are still remaining, in the "buffalo paths" which are to be seen in several parts of the new states. These are well beaten tracts, leading generally from the prairies in the interior, to the margins of the large rivers; shewing the course of their migrations as they changed their pastures periodically, from the low marshy alluvion, to the dry upland plains. In the heat of summer they would be driven from the latter by prairie flies, in the autumn they would be expelled from the former by the musquitoes; in the spring the grass of the plains would afford abundant pasturage, while the herds could enjoy the warmth of the sun, and snuff the breeze that sweeps so freely over them; in the winter the rich cane of the river banks, which is an evergreen, would furnish food, while the low grounds thickly covered with brush and forest, would afford protection from the bleak winds. I know few subjects more interesting than migration of wild animals, connecting as it does the singular displays of brute instinct, with a wonderful exhibition of the various supplies which nature has provided for the support of animal life, under an endless variety of circumstances. These paths are narrow, and remarkably direct, shewing that the animals traveled in single file through the woods, and pursued the most direct course to their places of destination.

Deer are more abundant in some places than at the first settlement of the country. They increase, to a certain extent, with the population. The reason of this appears to be, that they find protection in the neighborhood of man, from the beasts of prey that assail them in the wilderness, and from whose attacks their young particularly can with difficulty escape. They suffer most from the wolves, who hunt in packs like hounds, and who seldom give up the chace until a deer is taken. We have often sate on a moonlight summer night, at the door of a log cabin on one of our prairies, and heard the wolves in full chace of a deer, yelling very nearly in the same manner as a pack of hounds. Sometimes the cry would be heard at a great distance over the plain; then it would die away, and again be distinguished at a nearer point, and in another direction—now the full cry would burst upon us from a neighboring thicket, and we could almost hear the sobs of the exhausted deer, and again it would be borne away and lost in distance. We have passed nearly whole nights in listening to such sounds, and once we saw a deer dash through the yard, and immediately past the door at which we sate, followed by his audacious pursuers, who were but a few yards in his rear.

Immense numbers of deer are killed every year by our hunters, who take them for the hams and skins alone, throwing away the rest of the carcass. Venison hams and hides are important articles of export. The former are purchased from the hunters at 25 cents a pair, the latter at 20 cents a pound. In the villages of Illinois and Missouri we purchase, for our tables, the saddle of venison with the hams attached, for 37½ cents, which would be something like one cent a pound.

There are several ways of hunting deer, all of which are equally simple. Most generally the hunter proceeds to the woods on horseback, in the day time, selecting carefully certain hours, which are thought to be most favorable. It is said that during the seasons when the pastures are green, this animal rises from his lair, precisely at the rising of the moon, whether in the day or night; and I suppose the fact to be so, because such is the testimony of experienced hunters. If it be true, it is certainly a curious display of animal instinct. This hour therefore is always kept in view by the hunter, as he rides slowly through the forest, with his rifle on his shoulder, while his keen eye penetrates the surrounding shades. On beholding a deer the hunter slides from his horse, and while the deer is observing the latter, creeps upon him, keeping the largest trees between himself and the object of pursuit, until he gets near enough to fire. An expert woodsman seldom fails to hit his game. It is extremely dangerous to approach a wounded deer. Timid and harmless as this animal is at other times, he no sooner finds himself deprived of the power of flight than he becomes furious, and rushes upon his enemy making desperate lunges with his sharp horns, and striking and tramping violently with his forelegs, which being extremely muscular and armed with sharp hoofs, are capable of inflicting very severe wounds. Aware of this circumstance, the hunter approaches him with caution, and either secures his prey by a second shot, where the first has been but partially successful, or, as is more frequently the case, causes his dog to seize the wounded animal, while he watches his own opportunity to stab him with his hunting knife. Sometimes, where a noble buck is the victim, and the hunter is impatient or inexperienced, terrible conflicts ensue on such occasions.

Another mode, is to watch at night, in the neighborhood of the *salt licks*. These are spots where the earth is impregnated with saline particles, or where the salt water oozes through the soil. Deer and other grazing animals frequent such places, and remain for hours licking the earth. The hunter secretes himself here, either in the thick top of a tree, or most generally in a screen erected for the purpose, and artfully concealed like a masked battery, with logs or green boughs. This practice is pursued only in the summer, or early in the autumn, in cloudless nights, when the moon shines brilliantly, and objects may be readily discovered. At the rising of the moon or shortly after, the deer having risen from their beds, approach the lick. Such places are generally denuded of timber, but surrounded by it, and as the animal is about to emerge from the shade into the clear moonlight, he stops, looks cautiously around, and snuffs the air. Then he advances a few steps, and stops again, smells the ground, or raises his expanded nostrils, as if he "snuffed the approach of danger in every tainted breeze." The hunter sits motionless, and almost breathless, waiting until the animal shall get within rifle shot, and until its position in relation to the hunter, and the light, shall be favorable, when he fires with an unerring aim. A few deer only can be thus taken in one night, and after a few nights these timorous animals are driven from the haunts which are thus disturbed.

Another practice is called *driving*, and is only practised in those parts of the country where this kind of game is scarce, and where hunting is pursued as an amusement. A large party is made up, and the hunters ride forth with their dogs. The hunting ground is selected, and as it is pretty well known what tracks are usually taken by the deer when started, an individual is placed at each of those passes, to intercept the retreating animal. The scene of action being thus in some measure, surrounded, small parties advance with the dogs from different directions, and the startled deer in flying most generally pass some of the persons who are concealed, and who fire at them as they pass.

The elk, has disappeared. A few have been seen in late years, and some taken; but it is not known that any remain at this time, within the limits of any of the states.

The bear is seldom seen. This animal inhabits those parts of the country that are thickly wooded, and delights particularly in canebrakes, where it feeds in the winter on the tender shoots of the young cane. The meat is tender and finely flavored, and is esteemed a great delicacy.

Wolves are very numerous in every part of the western country. There are two kinds; the common, or black wolf, and the prairie wolf. The former is a large fierce animal, and very destructive to sheep, pigs, calves, poultry, and even young colts. They hunt in large packs, and after using every stratagem to circumvent their prey, attack it with remarkable ferocity. Like the Indian, they always endeavor to surprise their victim, and strike the mortal blow without exposing themselves to danger. They seldom attack man, except when asleep or wounded. The largest animals, when wounded, entangled, or otherwise disabled, become their prey; but in general they only attack such as are incapable of resistance. They have been known to lie in wait upon the bank of a stream which the buffalo were in the habit of crossing, and when one of those unwieldy animals was so unfortunate as to sink in the mire, spring suddenly upon it, and worry it to death, while thus disabled from resistance. Their most common prey is the deer, which they hunt regularly; but all defenceless animals are alike acceptable to their ravenous appetites. When tempted by hunger they approach the farm houses in the night, and snatch their prey from under the very eye of the farmer; and when the latter is absent with his dogs, the wolf is sometimes seen by the females lurking about in mid-day, as if aware of the unprotected state of the family. Our heroic females have sometimes shot them under such circumstances.

It is said by hunters that the smell of burning assafœtida has a remarkable effect upon this animal. If a fire be made in the woods, and a portion of this drug thrown into it, so as to saturate the atmosphere with the odor, the wolves, if any are within reach of the scent, immediately assemble around, howling in the most mournful manner, and such is the remarkable fascination under which they seem to labor, that they will often suffer themselves to be shot down rather than quit the spot.

Of the few instances of their attacking human beings, of which we have heard, the following may serve to give some idea of their habits. In very early times, a negro man was passing in the night, in the lower part of Kentucky, from one settlement to another. The distance was several miles, and the country over which he travelled entirely unsettled. In the morning his carcass was found entirely stripped of flesh. Near it lay his axe, covered with blood, and all around the bushes were beaten down, the ground trodden, and the number of foot tracks so great, as to shew that the unfortunate victim had fought long and manfully. On pursuing his track it appeared that the wolves had pursued him for a considerable distance, he had often turned upon them and driven them back. Several times they had attacked him, and been repelled, as appeared by the blood and tracks. He had killed some of them, before the final onset, and in the last conflict had destroyed several. His axe was his only weapon.

On another occasion, many years ago, a negro man was going through the woods, with no companion but his fiddle, when he discovered that a pack of wolves were on his track. They pursued very cautiously, but a few of them would sometimes dash up, and growl, as if impatient for their prey, and then fall back again. As he had several miles to go, he became much alarmed. He sometimes stopped, shouted, drove back his pursuers, and then proceeded. The animals became more and more audacious, and would probably have attacked him, had he not arrived at a deserted cabin, which stood by the way side. Into this he rushed for shelter, and without waiting to shut the door, climbed up and seated himself on the rafters. The wolves dashed in after him, and becoming quite furious, howled, and leaped, and endeavored with every expression of rage to get to him. The moon was now shining brightly, and Cuff being able to see his enemies, and satisfied of his own safety, began to act on the offensive. Finding the cabin full of them, he crawled down to the top of the door, which he shut and fastened. Then removing some of the loose boards from the roof, scattered them with a tremendous clatter upon such of his foes as remained outside, who soon scampered off, while those in the house began to crouch with fear. He had now a large number of prisoners to stand guard over, until morning; and drawing forth his fiddle, he very good naturedly played for them all night, very much, as he supposed, to their edification and amusement, for like all genuine lovers of music, he imagined that it had power to soften the heart, even of a wolf. On the ensuing day, some of the neighbors assembled and destroyed the captives, with great rejoicings.

The story of Putnam and the wolf is familiar to every schoolboy; but it is not so well known, that such adventures are by no means uncommon. The youthful achievement of the gallant revolutionary hero, has acquired dignity from the brilliancy of his after life, which was adorned with a long list of heroic and patriotic deeds, when in fact this exploit is one of ordinary occurrence among our resolute hunters. We select the following two instances, both of which are well authenticated.

Many years ago, a Frenchman, with his son, was hunting in a part of Missouri, distant about forty miles from St. Louis. Having wounded a large bear, the animal took refuge in a cave, the aperture leading into which, was so small as barely to admit its passage. The hunter, leaving his son without, instantly prepared to follow, and with some difficulty drew his body through the narrow entrance. Having reached the interior of the cave, he discharged his piece with so true an aim as to inflict a mortal wound upon the bear. The latter rushed forward, and passing the man, attempted to escape from the cave, but on reaching the narrowest part of the passage, through which it had entered with some difficulty, the strength of the animal failed, and it expired. The entrance to the cave was now completely closed by the carcass of the animal. The boy on the outside, heard his father scream for assistance, and attempted to drag out the bear, but found his strength insufficient. After many unavailing efforts, he became much terrified, and mounted his father's horse with the determination of seeking assistance. There was no road through the wilderness, but the sagacious horse, taking the direction to St. Louis, carried the alarmed youth to that place, where a party was soon raised and despatched to the relief of the hunter. But they searched in vain for the place of his captivity. From some cause not now recollected, the trace of the horse was obliterated, and the boy in his agitation, had so far forgotten the landmarks as to be totally unable to lead them to the spot. They returned after a weary and unsuccessful search; the hunter was heard of no more, and no doubt remained of his having perished miserably in the cave. Some years afterwards, the aperture of the cavern was discovered, in a spot so hidden and so difficult of access as to have escaped the notice of those who had passed near it. Near the mouth was found the skeleton of the bear, and within the cave, that of the Frenchman, with his gun and equipments, all apparently in the same condition as when he died. That he should have perished of hunger, from mere inability to effect his escape by removing the body of the bear, seems improbable, because supposing him to have been unable by main strength to effect this object, it would have cost him but little labor to have cut up and removed the animal by piecemeal. It is most likely either that he was suffocated, or that he had received some injury, which disabled him from exertion. The cave bears a name which commemorates the event.

The other circumstance to which we allude, occurred in Monroe county, in Illinois. There are in many parts of this country, singular depressions or basins, which the inhabitants call *sink-holes.* They are sometimes very deep, circular at the top, with steep sides meeting in a point at the bottom, precisely in the shape of a funnel. At the bottom of one of these, a party of hunters discovered the den of a she wolf, and ascertained that it contained a litter of whelps. For the purpose of destroying the latter, they assembled at the place. On examining the entrance to the den, it was found to be perpendicular, and so narrow as to render it impossible or very difficult for a man to enter; and as a notion prevails among the hunters, that the female wolf only visits her young at night, it was proposed to send in a boy to destroy the whelps. A fine, courageous boy, armed with a knife, was accordingly thrust into the cavern, where, to his surprise, he found himself in the company of the she wolf, whose glistening eye-balls, white teeth, and surly voice, sufficiently announced her presence. The boy retreated towards the entrance, and called to his friends, to inform them that the old wolf was there. The men told him that he was mistaken; that the old wolf never staid with her young in daylight; and advised him to go boldly up to the bed and destroy the litter. The boy thinking that the darkness of the cave might have deceived him, returned, advanced boldly, and laid his hand upon the she wolf, who sprang upon him, and bit him very severely, before he could effect his retreat, and would probably have killed him, had he not defended himself with resolution. One or two of the men now succeeded in effecting an entrance; the wolf was shot, and her offspring destroyed.

The prairie wolf, is a smaller species, which takes its name from the habit of residing entirely upon the open plains. Even when hunted with dogs, it will make circuit after circuit, round the prairie, carefully avoiding the forest, or only dashing into it occasionally when hard pressed, and then returning to the plain. In size and appearance, this animal is midway between the wolf and the fox, and in color it resembles the latter, being of a very light red. It preys upon poultry, rabbits, young pigs, calves, &c. The most friendly relations subsist between this animal and the common wolf, and they constantly hunt in packs together. Nothing is more common than to see the large black wolf in company with several of the prairie wolves. The latter resembles the jackall of Asia, and if not the same animal, is a variety but little distinguished from it. The prairie wolf is timid, and seldom approaches a farm house at which dogs are kept. They are said to have a particular aversion to the yell of the hound, and to disappear entirely from a neighborhood where a pack is kept for hunting.

Some years ago an agricultural society established at the seat of government of Illinois, offered a large premium to the person who should kill the greatest number of wolves in one year. The legislature at the same time offered a bounty for each wolf scalp that should be taken. The consequence was that the expenditure for wolf scalps became so great, as to render it necessary to repeal the law. These animals, although still numerous, and troublesome to the farmer, are greatly decreased in number, and are no longer dangerous to man. We know of no instances in late years, of a human being having been attacked by them.

We have the fox, in some places in great numbers; though generally speaking I think the animal is scarce. It will undoubtedly increase with the population.

The panther and wild-cat, are found in our forests. Our open country is not, however, well suited to their shy habits; and they are not now numerous even in the wooded country.

The beaver and otter, were once numerous, but are now seldom seen except on our frontiers.

The gopher, is as we suppose, a nondescript. The name does not occur in books of natural history, nor do we find any animal of a corresponding description. The only account that we have seen of it, is in "Long's 2d Expedition." In a residence of many years in the country where it is said to have been most numerous, we have never seen one near enough to examine it, and to be certain that it was not something else. That such an animal exists is doubtless. But they are very shy and their numbers small. They burrow in the earth, and are supposed to throw up those hillocks which are seen in such vast abundance over our prairies. This is to some extent a mistake, for we know that many of these little mounds are thrown up by craw-fish, and by ants.

The polecat is very destructive to our poultry.

The racoon, and opossum are numerous, and extremely troublesome to the farmer, as they not only attack his poultry, but plunder his cornfields. They are hunted by boys, and large numbers of them destroyed. The skins of the racoons pay well for the trouble of taking them, as the fur is in demand.

Rabbits are abundant, and in some places extremely destructive to the young orchards, and to garden vegetables.

The black and grey squirrels are very abundant. These beautiful, but destructive little animals, were very annoying to the first settlers, by devouring large quantities of their corn in the fields, before it was sufficiently ripe to be gathered. One peculiarity in the history of this animal is very remarkable. Sometimes, in the course of a few years, they become so numerous in one section of country, as to threaten destruction to the entire crops; when, as if by common consent they commence an emigration, which is usually from west to east, in bodies so numerous as to defy any attempt at computation, crossing the largest rivers that lie in their course. Many perish by drowning, and thousands are killed by the boys, who crowd to the shores, to intercept the weary and breathless emigrants at their landing. At the commencement of their march they are very fat; but towards its conclusion they become poor and sickly. After such an event they are scarce for several years, then multiply, emigrate, and perish as before. The cause of this phenomenon has never been explained. It cannot be want of food, for the districts they leave are often as fruitful, as those to which they direct their course, and the healthy condition in which they set out, leaves no room to suppose that the danger of starvation has driven them from home. Our hunters shoot these small animals with rifles, bringing them down from the tops of the tallest trees, with a single ball; and when their depredations become great, large parties are formed, which scour the woods, killing thousands in a day.

In return for the animals which have left us, we have gained a great number by emigration, which were not known to inhabit this region at its first settlement.

The honey bees are not natives of this country, but they have always kept a little in advance of the white man, and while they continue numerous in the settlements are particularly so upon the frontier. On the verge of civilization, bee-hunting furnishes employment to many individuals during several months of the year; and the tables of all the farmers are amply supplied with the rich treasures of the laborious insect. Honey and beeswax are among the staples of all the new states.

Rats were not known in this country, for many years after its settlement. They were first brought, by the boats, to the villages on the shores of the navigable rivers, and gradually spread over the interior.

Birds of song but seldom enliven the gloomy monotony of the forest. Few, if any, of these, are carnivorous, and it is not until the labor of the farmer has covered the soil with fields of grain, that the cheerful notes of the songster are heard. We have now a great variety of singing birds, which have rapidly followed the population from the other side of the mountains.

Of birds, that which is most peculiar to this country, as well as most numerous, is the prairie fowl, or grouse. It is nearly as large as the common hen. The flesh is delicate and finely flavored. The female resembles the quail in shape and color, and the male, who erects his plumage and struts like the turkey and peacock, is chiefly distinguished by a tuft of feathers on the head, and a tail longer and more ornamented than that of his mate. Their only note is a low, strong, melancholy sound, resembling the cooing of the dove, which may be heard at a considerable distance; and the traveler in passing over the prairie at sunrise, hears this singular noise in every direction, and if unacquainted with its source, is at a loss whether to attribute it to a numerous colony of doves, of owls, or of tremendous bull frogs, for it partakes of the tone of each of these animals.

The prairie fowl are seldom seen in the woods, but confine themselves chiefly to the long grass of the plains, scarcely ever rising on the wing, except when disturbed. In the autumn they assemble round the cornfields and wheat-stacks in search of food, and in the winter venture into the barn yards. They do not at any time evince much shyness towards man, and may often be seen mingling with the domestic fowls, when the farmer's dwelling happens to be situated on an unfrequented part of the prairie. They are easily shot sitting or on the wing; and are taken in great numbers in traps. When the prairies are covered with snow they settle in large flocks on the trees. The writer has seen thousands of them together on such occasions. They eat freely, and fatten, when confined in coops, and could probably be domesticated with little difficulty.

Quails are numerous. These are often taken by driving them into a long cylindrical net, distended by hoops, one end of which is open, and the other closed. The net is laid at its length along the ground, with the open end against a heap of brush, or in a little thicket, and the skill of the drivers, who are usually mounted on horseback, is shewn in forcing the birds to enter it.

There are pheasants in some parts of this country, but they are seldom seen, and are probably not numerous.

A few years ago the beautiful and majestic swan might be seen floating upon all our rivers, but they are now found only in secluded situations.

Geese, ducks, cranes, and other water fowl frequent our streams in prodigious numbers. Great quantities of them are killed for the feathers, which constitute a considerable article of traffic.

The yellow plover frequents the prairies in the spring in immense flocks, and a nice little bird it is, graceful to shoot at, and very delicious to swallow.

Wild turkeys are still abundant. They are shy and difficult to shoot, but our hunters kill great numbers of them. In the spring they are found in pairs, but during the rest of the year in flocks consisting of the old pair, and the last brood. Fine turkeys may be bought from the hunters for twelve and a half cents a piece.

We have the mocking bird, the Baltimore bird, the red bird, the blue jay, the humming bird, and indeed, most of the feathered tribes which are known in the Atlantic states; with the addition of the paroquet, a bird of beautiful plumage, but very bad character, whose thievish propensities renders him a great nuisance to orchards and cornfields.

I have never seen any of those *pigeonroosts*, which have excited so much curiosity, and where these birds are said to alight in such quantities as to break down the limbs of the trees.

Of reptiles the most formidable is the rattlesnake. This animal is most usually found in mountainous situations, where the dens among the rocks afford them secure harbors; of course our plains, entirely destitute of rock and affording no suitable retreats for such reptiles, do not abound in them. The fires which annually spread over the prairies, doubtless destroy great numbers of them; the hogs which in this country are allowed to roam at large in great herds, are their inveterate enemies, and probably devour many. We have also the moccasin snake, and copperhead, both of which are very venomous; but we are inclined to think that in general snakes are not numerous.

Two instances occurred some years ago, in which death was occasioned by the bite of the spider, and the belief became current that a peculiarly venomous variety of that reptile existed among us. I have inquired carefully into both these cases, without finding the slightest evidence to support that supposition. One of the persons bitten was a young lady. She was not attended by a physician, nor are the facts of her case correctly understood. No inference can therefore be drawn from it. The other was a man who was ploughing in his field, on a very hot day, when feeling himself bitten on the arm; he suddenly struck the place with his open hand and crushed a large spider, which doubtless had inflicted the wound. It swelled rapidly, and the man alarmed ran home, and sent for a physician, who arrived in about four hours, and shortly after, the death of the patient ensued. I did not converse with the physician, but a medical friend who spoke with him on the subject, suggests the following facts: that the system of the patient was in a state that predisposed to inflammation—that the sting touched an irritable part—that the weather was extremely hot and the man heated by labor—and that his alarm and the violent exertion of running to his house, a considerable distance, added to the action of the other causes, and gave virulence to the poison, which under more favorable circumstances would only have occasioned a slight wound. The writer was once very seriously ill for several days from the sting of a bee, under similar circumstances. There have been instances in which the sting of the latter insect has occasioned death. Our inference is that the two cases above mentioned, do not furnish any evidence of the existence in this country of a variety of the spider whose bite is ordinarily attended with dangerous consequences.

CHAPTER X.

Agricultural Products.

The following remarks must be understood as applying to the state of Illinois, unless where other places are indicated. The writer's personal knowledge is confined chiefly to that region. The intelligent agriculturalist will easily apply the remarks to other sections of the country, making the due allowance for difference of latitude, and keeping in mind the great similarity of soil and exposure, which prevails over the whole western plain.

In speaking of the products of a new country, our estimate must necessarily be, to a great extent, prospective. The first settlers are too much occupied in providing the means of subsistence, to be able to make much for sale; nor do the farmers of any country raise produce to a large amount, until they are satisfied of being able to dispose of it to advantage. Trade and agriculture are so nearly connected, that neither can flourish separately. In order to support an active, steady, and lucrative trade, a variety of causes must co-operate together; and these causes must be sufficiently permanent to produce similar results throughout a series of years. The supply of produce must be abundant and regular, so as to enable the trader to make his arrangements in advance, and to calculate with reasonable certainty; and its quality must be such as to bring it into fair competition with a corresponding product from another country. Then there must be a market, easy of access; and a mode of transportation which shall be cheap, rapid, and safe, or which shall possess these advantages to a certain extent. There are a variety of other circumstances which are incidental, and which may or may not operate, at any given time; but all of which do invariably, at some period or other, exert an influence upon trade and agriculture. Such are chiefly the condition of the circulating medium, the rate of exchange, the existence of war and peace in our own or other countries, the prevalence of famine, disease, or other calamity in large districts, and the influence of good or evil legislation.

It must be very evident, therefore, that in a new country, nothing can be settled, upon these points; and that our farmers will, for some years, be uncertain as to the proper objects upon which to expend their labor. They will be to some extent discouraged; and will exert less industry than they would if the channels of trade were fully opened, the markets regular, and the chances of success well understood. Besides, most of the products of a new country must be carried to market in a raw state, and of course in their most bulky and most perishable condition. It is clear that if, in any district, wheat may be made, but not flour, the choice of market and chances of sale are greatly reduced to the farmer; while the risk of loss, and the expenses of transportation must be greatly enhanced. In a new country, therefore, we seldom find any great variety in the agricultural products; and scarcely any are raised but such as require but little labor, are in general use, and may be disposed of in their crude state. These are generally raised in great profusion, and sold low. For these reasons the products of Illinois are comparatively few in number; but it will be seen that this fact is not attributable to the soil or climate, but to other circumstances.

This state presents to the farmer a combination of advantages, in reference to its productions, which are scarcely to be found in any other country. Situated in the same latitude with Pennsylvania, and Virginia, it yields all the products which arrive at maturity in those states; while its interior position protects it from the extremes and vicissitudes of climate which are felt upon the sea-coast, where the warmth of spring is chilled by storms rushing from snow-clad mountains, and the ocean breeze sweeping at all seasons over the land, produces sudden changes, and often reverses, for a time, the order of the seasons. Although we are not exempt from the operation of such casualties, we believe that there is no country where the just expectations of the farmer, are so seldom blighted, as in ours. We may plant early, or gather late ; we carry on the business of husbandry throughout the whole year, and we find but few days at any one time, in which the laborer may not be usefully employed. We have the advantages of various climates, without suffering greatly from their inclemencies.

Wheat, rye, barley, buck-wheat, oats, hemp, flax, turnips, and Irish potatoes, all of which arrive at perfection in more northern latitudes, succeed equally well here. The two latter, particularly, attain a degree of size and excellence, that we have never seen exceeded, and the crops yield abundantly. The produce of the potatoe crop is from twenty to twenty-four fold. No crop pays in quantity and quality more than this, for careful cultivation. The crops raised vary from one hundred and fifty to eight hundred bushels to the acre. The latter however is an extraordinary crop. The turnip is raised only for the table, but produces well. With regard to wheat, there is some diversity of opinion; not whether this grain will grow, but whether it is, or is not, produced in this country in its *greatest perfection.* We are inclined to adopt the affirmative of this proposition. It is true, that our crops vary greatly, both in the amount and quality of the produce. But we are satisfied that this disparity arises from the degree of care bestowed on the culture. Our husbandry is yet in a rude state. Wheat is often sowed in new land but partially cleared, often upon corn ground badly prepared; often covered carelessly with the plough, without any attempt to pulverize the soil, and very generally in fields which have produced an abundant crop of grass and weeds, during the preceding autumn. Few of our farmers have barns or threshing floors; the grain is preserved in stacks, and trodden out upon the ground, with considerable loss, and injury. With all these disadvantages excellent crops are raised, and the grain is remarkably good. We learn from a respectable source, that the wheat of Illinois and Missouri, is superior to that of the other western states; it is worth more to the baker, and the bread made from it is lighter, and more nutritious. This fact is attributable to the richness of the soil, and the dryness of the atmosphere; the former cause brings the grain to its greatest state of perfection, while the latter protects it from all those injuries which are produced by moisture.

In the years 1830 and 1831, wheat was raised on the prairies both of Illinois and Missouri, which weighed sixty-eight pounds to the bushel. The writer would not state this fact, if he had not himself seen a bushel of this grain carefully weighed and measured, besides having the corroborating testimony of gentlemen residing in both these states, who all agreed in making the same statement. Sixty pounds is the standard weight of a bushel of wheat in the states east of the mountains; this weight is very rarely exceeded, and sixty-three is probably the maximum of the finest grain. In Ohio it has been known to weigh sixty-four, and we have heard of one instance of its weighing sixty-five pounds. We saw a bushel of wheat weighed in Kentucky in 1831, which weighed sixty-seven; in Illinois and Missouri alone has it been found to reach to sixty-eight, and that weight we suppose to be not uncommon there.

A gentleman from the east, who traveled through Illinois in 1830, was so struck with the whiteness and beauty of the flour made at Collinsville, as to be induced to carry a sample to Boston, where it was pronounced superior to the best Baltimore flour. From these facts we are justified in asserting, that the soil and climate of this country is particularly propitious to the growth of wheat; and that the prairie region especially, produces this grain in its greatest perfection. Twenty-five to thirty bushels are raised to the acre, and the price varies from fifty to seventy-five cents. Steam mills, for the manufacture of flour, have been erected in various parts of Illinois.

In Ohio, flour is one of the greatest staples. The other staples for export, are whiskey, pork, lard, bacon, beef, cattle, horses, butter, cheese, and apples. The agriculture of this state has assumed a steady character. Mills and distilleries afford amply the means of manufacturing grain for market; while roads, canals, and other facilities for transportation, have become so numerous as to encourage the farmer to exert his best energies.

Indian corn, is the great staple of the whole west. It is raised in immense quantities, with but little labor, and is sold at from 8 to 50 cents per bushel; thousands of bushels are annually disposed of in the interior parts of the country, at the former price. It constitutes the most prominent article of food for man, and of provender for stock. If a western farmer be asked the question, how many bushels of corn are raised to the acre, the usual reply is, *one hundred.* This quantity may be produced, on fine soil, with assiduous culture; but under ordinary circumstances, with careful attention, sixty bushels is about the average crop.

Cotton, tobacco, and sweet potatoes, which are indigenous to more southern latitudes, succeed well in all except the most northern parts of this region. Cotton has not become a staple for exportation, because its production requires more labor than can be afforded to it in a new country, where there are no slaves. But the farmers in Illinois, Missouri, and the southern parts of Indiana and Kentucky, raise it for home consumption; they make all that they use, and most of their families are clad in cotton fabrics, manufactured at home.

Our tobacco crops are not exceeded any where. It has not been extensively produced, except in Kentucky and part of Missouri, for the same reason that prevents the raising of cotton; but it has been tried in all the western states with success. It forms a staple of Kentucky, where it is produced in large quantities. From a part of Illinois, lying near the Wabash, a good many hogsheads have been annually exported, and the result of the experiment has been altogether satisfactory. A few hogsheads sent from Kaskaskia to New-Orleans some years since, was pronounced by the inspector to be the best ever brought to that market. We could not adduce a stronger proof than this, in favor of our soil and climate. The tobacco plant, although coarse in its appearance, is one of the most delicate of the vegetable kingdom. It thrives only in a rich, light, warm soil, requires to be planted early in the spring, and gathered late in the autumn. In every stage of its growth, it needs culture and attention, and is at all times sensitive to cold, and easily destroyed by frost. When we say therefore, that ours is one of the best tobacco countries in the world, we assert the strongest evidence of the fertility of the soil, and the mildness of our climate.

Of the grasses it is hardly necessary to speak. The prairies, bottom lands, and forests, abound in excellent pasturage; and there can be little doubt of the success of a species of production, which is indigenous to the country. Artificial grasses have been extensively introduced, and have succeeded well; but those who have seen the cattle wading in prairie grass as high as their backs, cannot doubt that pastures, equally luxuriant, and far more nutritious, may be produced by art, when these shall be destroyed. Grass is the natural and characteristic growth of the country. The *blue grass* grows spontaneously wherever the soil has been trodden hard; it skirts the road-sides, and covers the commons around our towns; the sites of Indian villages and encamping grounds, though long since deserted, are often discovered by the verdant carpet of blue grass which clothes the soil. In Kentucky it is extensively cultivated for pasture, and is highly esteemed. Hay is exported to the more southern states, where it finds a ready sale.

The *Palma Christi*, or castor bean, has been raised in large quantities, and a great deal of excellent oil exported.

Rye and barley are not cultivated to any great extent, because there is no market to which they can be exported, to advantage, and they are but little esteemed for home consumption. Both these grains however are produced in sufficient quantities to supply the demands of the breweries and distilleries. Oats are much used for horse-food, but for no other purpose.

Hemp and flax grow well. The former has been cultivated very extensively and with success, in Kentucky, for many years, and the product is said to be of excellent quality. The rich lands of that state, and of Ohio, Indiana, Illinois, and Missouri, are generally well adapted to the cultivation of this valuable plant. It is raised with the greatest success in the counties around Lexington. The quantity of nett hemp produced to the acre, is from six hundred to one thousand weight, varying according to the fertility and preparation of the soil, and the state of the season. The price of the lint when prepared for the manufacturer, has varied from three to eight dollars, for the long hundred. The average price is from four to five dollars.

The western states are too new to afford the cultivated fruits in great abundance; but the experiments which have been tried, sufficiently attest their peculiar adaptation to our soil and climate; and if further evidence be desired, it is found in the quantity and excellence of our wild fruits; for it is fairly inferable, that where the latter grow spontaneously, the corresponding domestic fruits, and those of a similar character, may be produced by art. We have the grape, plum, crab-apple, cherry, persimmon, gooseberry, mulberry, strawberry, raspberry, pawpaw, and blackberry, growing wild. Of these, the grape is the most important, and perhaps the most abundant. It is found in *all the western states*, and in every variety of soil; in the prairies, it is interwoven with every thicket, and in the river bottom, it climbs to the tops of the tallest trees. The vine is very prolific, and the fruit excellent. Indeed, we do not know of any part of the United States, in which the native grape flourishes so luxuriantly; and when we consider this fact, in connection with the mildness of the climate, we may well be encouraged to hope, that the vines of foreign countries will find here a congenial soil. We know of one gentleman, in Illinois, who made twenty-seven barrels of wine in a single season, from the grapes gathered, with but little labor, in his immediate neighborhood; and we suppose that the quantity might have been increased almost indefinitely, had the encouragement been sufficient. The French, who first settled this country, are said to have made a wine resembling claret; which was so good, that the merchants of Bourdeaux, used exertions to prevent its exportation, and procured an edict to that effect.

The vine has succeeded well at Harmony and Vevay in Indiana, under the culture of the foreigners who settled at those places, but their wines were not such as to grow into repute. A public spirited gentleman at Cincinnati, has upwards of one hundred and fifty varieties of foreign grapes, under culture, some of which produce well. His wine is highly approved by connoisseurs.

The earliest fruit which ripens is the wild strawberry, which comes to perfection about the last of May. It grows on poor land where there is little timber.

The wild gooseberry is very full of thorns, and produces a small fruit, of an agreeable taste. It is scattered throughout the west, but is most abundant on the upper Mississippi.

Pawpaws are very abundant on the bottom lands and rich hills. The fruit is delicious; and those who have overcome a distaste which the cloying richness, and singular flavor, occasions to a palate unaccustomed to this very elegant production, become exceedingly fond of it. Scarcely any brute will eat the Pawpaw; even the omnivorous hog will not touch it. It is said that the Racoon has taste enough to be fond of it; if so he has a rich banquet in almost exclusive enjoyment, for we know of no other animal, but man, by whom this fruit is relished.

The wild plum, is found in all the western states, and bears immense quantities of fine fruit. The varieties are numerous. Its growth is an indication of fine land. It is scattered thinly through all our alluvion soils near the rivers, and is found in dense groves on the prairies.

Of domestic fruits, the peach and apple are most common; the pear is less generally cultivated, but succeeds equally well. Our apples are remarkably fine; the trees grow rapidly, are smooth, vigorous and healthy; they bear abundantly and the fruit is large and finely flavored. Orchards are numerous in Ohio, and very prolific. In the more western states, the apple tree has not yet been cultivated to the same extent; but we have never seen this tree flourish better, or produce finer fruits than in Illinois. No market in the United States, is supplied with finer apples and pears, or with a greater abundance than that of Cincinnati; it is perhaps, in respect to those fruits, unequaled.

Of our delicious peaches, we shall speak briefly.

They cannot be excelled in size or flavor. The best that we have seen, were in Kentucky. The fruit however, often fails. Our winters are so short, that the buds often swell prematurely, and are destroyed by frost, even before the opening of spring. But when the trees bear, they are loaded with immense quantities of fine fruit.

Quinces, cherries, and plums, succeed well; and the same remark will apply to the gooseberry, the currant, the strawberry, and the raspberry, all of which except the currant, are indigenous. We have seen all these fruits growing in great perfection; and in no instance have we seen much art bestowed on their culture—scarcely any beyond the act of planting.

With respect to garden vegetables, we speak from experience.—The writer of this article, spent most of his leisure hours, for several years, in the cultivation of a large garden; and the remarks now submitted, are the result of careful observation. A very voluminous western writer has said, that "under this powerful sun, all the roots and vegetables are more tasteless than those of the north. It is instantly perceived that the onion is more mild, the blood beet less deeply colored; and this thing holds good, as far as my experience goes, in the whole vegetable creation. Take every thing into consideration, this is not so good a country for gardens." "Cabbages and peas, owing to the burning heat of the sun, and the dryness of the seasons, are inferior in quality and abundance."

It is to be remarked, that horticulture is an art which is seldom carried to any degree of perfection, except in populous and wealthy neighborhoods. The finest gardens are always found in the vicinity of large cities. Farmers have no time to expend in furnishing their tables with mere luxuries.. Nothing requires more unremitting care, or more severe labor, than a garden; they are, therefore, usually found in the possession of wealthy men, who keep them, at great expense, for amusement, or under the care of gardeners, who cultivate them for the purpose of supplying the markets. There are other persons, who combine economy with enjoyment, in devoting some time to horticulture; but all these classes of individuals exist, chiefly, in countries where luxury and taste prevail, to a considerable extent, or where provisions are so costly, as to make their production a matter of importance. In these cases, gardening is pursued as an elegant and useful art; and is advanced, step by step, to its greatest degree of perfection. Soil and climate, it is true, are the most important agents in the rearing of fine vegetables; but these luxuries are, after all, mainly produced by the wealth, the labor, and the ingenuity of man. In new countries, therefore, they are not to be expected. Few persons here, we might almost say *none*, have money or leisure to expend in matters of taste and luxury. Farmers, especially, are apt to commit this department to the females of their household, whose other cares allow them to devote to it but little care. We plead guilty then, as a general fact, of having bad gardens. But we by no means admit, that our vegetables are deficient, either in abundance or quality, when proper care is paid to their culture. We *know* that the contrary is true. The simple fact is, that our country teems with the bounties of nature in such rich profusion, that the people, not being obliged to labor to supply their tables, are apt to grow careless. They put their seed in the ground, and trust to providence to give the increase. Their garden grounds are not only badly prepared, and as badly attended, but the seeds are selected without any care. The reason, therefore, why, as a general fact, the art of horticulture has been brought to but little perfection at the west, is evident.

But when it is said, that the vegetables of this country are inferior in quality, we come to another question, to decide which, it is proper to refer to the cases in which they have been subjected to a sufficient degree of culture. Almost every farmer here, raises cabbages, and we are sure that we have never seen larger or better. A hundred heads are sold in Illinois for a dollar and fifty cents. The parsnips and carrots of this country are remarkable for their size, sweetness, and flavor; the former, especially, have a richness, which we have never noticed elsewhere. Our beets are as delicate and sweet as is possible; and we only forbear stating a fact, with regard to their size, which has come to our knowledge, from the fear of startling the credulity of our readers. Peas are excellent, and very prolific. We have seen radishes three inches in thickness, and perfectly solid, mild, and crisp. Our lettuce, if well dressed, (there is a great deal in that) is capital. The tomatus, is common all through this country. It is only necessary to plant it once, after which, it comes up every year spontaneously; and bears abundantly, from the middle of the summer, until nipped by the frost. Thousands of bushels of onions have been raised with no other labor, than sowing the seed broadcast, in new ground; and as to their quality, it would do the heart of a Wethersfield lady good to look at them. That goodly town of Connecticut would be depopulated, if its worthy inhabitants could see the onion-fields of Morgan county, and the military tract, in Illinois. We might enumerate other articles, but it is enough to say that, in general, the vegetables suited to our climate, are produced in their greatest perfection. It would, indeed, be an anomaly in the economy of nature, if garden plants did not flourish vigorously, in a soil of unrivaled depth, fertility, and freshness.

The vegetable market at Cincinnati is one of the finest in the world. At Pittsburgh, Louisville, St. Louis, and other large towns where the encouragement is sufficient to induce the raising of vegetables for market, they are equal in size and flavor, to those of the eastern cities, though the variety of kinds is not so great. At the tables of gentlemen in every part of Kentucky, the profusion and excellence of the vegetables, is such as to afford a subject of remark to the observant traveler. We are well satisfied that a careful examination of this subject would show, that the horticultural productions of the west, are in general superior in size, delicacy, and flavor, to those of any other part of the United States.

We subjoin a table of average dates, extracted from Dr. Drake's admirable Picture of Cincinnati, which will enable practical men to form a tolerably accurate idea of the progress and decay of vegetation, within our season.

FLORAL CALENDAR.

March 5. Commons becoming green.
" 6. Buds of water maple beginning to open.
" 6. Buds of lilac beginning to open.
" 7. Buds of weeping willow beginning to open,
" 8. Buds of gooseberry beginning to open.
" 12. Buds of honey-suckle beginning to open.
" 26. Buds of peach tree beginning to open.
" 26. Radishes, peas, and tongue grass planted in the open air.
April 8. Peach tree in full flower.
" 8. Buds of the privet beginning to open.
" 15. Buds of the cherry tree beginning to open.
" 15. Red currants beginning to flower.
" 18. Buds of the flowering locust beginning to open.
" 18. Lilac in full flower.
" 20. Apple tree in full flower.
" 24. Dogwood in full flower.
May 9. Flowering locust in full bloom.
" 12. Indian corn planted.
" 12. Honey-suckles beginning to flower.
June 4. Cherries beginning to ripen.
" 4. Raspberries beginning to ripen.
" 6. Strawberries beginning to ripen.
" 6. Red currants beginning to ripen.
" 24. Hay Harvest.
July 4. Rye harvest begun.
" 10. Wheat harvest begun.
" 12. Blackberries ripe.

July 15. Unripe corn in market.
" 18. Indian corn *generally* in flower.
" 21. Oat harvest.
Aug. 5. Peaches in market.
Sept. 20. Forest becoming variegated.
Oct. 25. Indian corn gathered.
" 30. Woods leafless.

For the purpose of comparison, we add a few memoranda made by the writer at Vandalia, Illinois, in the spring of 1830.

April 1. Peach trees in bloom.
" 2. Asparagus fit for the table.
" 3. Peas, beans, and onions planted.
" 6. Heart's ease and violets in bloom.
" 7. Beets, carrots, parsnips, and other roots planted.
" 10. Spring had completely opened; and the prairies were green. Gooseberry and currant bushes in bloom.
" 15. Cabbage plants transplanted.
" 18. Lilac in bloom—strawberry vines in bloom.
" 19. A great variety of wild flowers in full bloom.
" 20. Nearly all our garden seeds had been planted.
" 25. Raspberries in bloom.
" 27. Lettuce, radishes, pepper-grass, &c. fit for use.
" 30. Roses and honey-suckles in full bloom.

I make no apology for adding, more at large, the following valuable remarks, in reference to the spring season of 1836, furnished in a letter to me, from my friend Dr. Clap of New Albany, Indiana.

"Vegetation has been later, especially in the fore part of the month (April) than has ever been known by the oldest inhabitants. From the 22nd to the end of the month, the weather was very open and pleasant; the thermometer ranging, in the hottest part of the day, from 75 to 85.

"The latitude of New Albany, according to the land surveys is 38 deg. 12 min. north, though stated differently in some publications. The elevation of the second bank, at the court house, by the actual survey of engineers employed by the state, is 426 feet above the tide water of Hudson river. It is on this bank the greater part of the plants mentioned are found. On the west of the town rises a range of hills called the *knobs* running nearly due north, elevated about 500 feet, and beyond which the country is generally elevated upwards of 300 feet above the Ohio bottoms, and the vegetation some days later than on the river shore. I have been thus particular, deeming it essential to an accurate understanding of the progress of vegetation. Many floral calendars are of little value for comparison, in consequence of the want of detail in reference to elevation and local causes, as well from general carelessness.

"Professor Bigelow, who is remarkable for his general accuracy, in his observations on the peach tree in different places, concludes that vernal flowering varies *four* days for each degree of latitude. The peach in this vicinity however, varies more in its time of flowering in different years than any of our native forest trees, or even our indigenous herbaceous plants. The difference between the present year and 1834—no record having been kept by me of 1835—was 27 days for the peach, while other trees and herbaceous plants varied from 15 to 21 days.

"The foliation of the beech is probably one of the best standards of comparison between different places. It is more diffused, and adds more to the verdure of the forest, than any other tree, and the structure of its buds is such, that they continue to swell and elongate without the least appearance of verdure, until the moment they expand, when the largest leaves are nearly an inch in length, and frequently grow more than an inch per day, for some time.

"From a hasty examination of calendars of vegetation, at Deerfield and Plainfield, Mass., the German Flats, N. York, and Philadelphia, it appears probable that Professor Bigelow's estimation of four days for each degree of latitude, is not high enough, especially between the western and eastern states. Although the mean temperature is said to be the same for the corresponding parallels of latitude on both sides of the Alleghenies, the season is probably earlier in the western states, the soil and elevation being the same. The subject, however, requires some years of careful observation to obtain the proper data for comparison.

"The earliest appearance of the flowers is the time noted in the following table unless otherwise stated. The plants enumerated are not all that were observed but those only that had just bloomed at the time of observation.

April 1836.

2d	Elm,	*Ulmus Americana.*
"	Red Maple,	*Acer Rubrum.*
4th		*Erigenia Bulbosa.*
"	Rice Anemone,	*Anemone Thalictroides.*
5th	Spring Beauty,	*Claytonia Virginica.*
"	Spice bush,	*Laurus Benzoin.*
9th	Shepherds purse,	*Thlaspi Bursa pastoris.*
"		*Ranunculus abortivus.*
10th		*Luzula Campestris.*
12th	Grey Willow,	*Salix Grisea.*
13th	White flowered Adder's tongue,	*Erythronium Albidum.*
"	Blue violet,	*Viola Cucullata.*
"	Yellow do.	" *pubescens.*
"	Ground Ivy,	*Glechoma hederacea.*
"	Mouse ear cress,	*Arabis Thaliana.*
"	Wild Sweet William,	*Phlox divaricata.*
"	Calico Weed,	*Dielytra cucularia.*
14th	Chickweed,	*Stellaria media.*
"	Yellow flowered Adder's tongue,	*Erythronium Americanum.*
"	American water cress,	*Cardamine Virginica.*
16th	Greek Valerian,	*Polemonium reptans.*
"	Peach trees, (beginning to blossom)	*Amygdalus Persica.*
17th	Red Currants,	*Ribes Rubrum.*
19th	Dandelion,	*Leontodon Taraxacum.*
20th	Morello cherry, var. of	*Prunus cerasus.*
21st	Flowering Almond,	*Amygdalus nana.*
"	Peach trees in full bloom.	
22d	Sassafras,	*Laurus Sassafras.*
"	Red bud,	*Cercis Canadensis.*
"	Ragwort,	*Senecio Aurea.*

22d	Plaintain endweed,	*Gnaphalium plantaginum.*
"		*Stellaria pubera.*
23d	Lungwort,	*Pulmonaria Virginica.*
24th	Apple tree, (beginning to flower)	*Pyrus malus.*
"	Thyme leaved speedwell,	*Veronica serpyllifolia.*
"	Morello cherry in full bloom.	
25th	The forest becoming green, caused mostly by the leafing of the beech.	
"	Crane's bill,	*Geranium maculatum.*
"	Dogwood,	*Cornus Florida.*

Note. The white involucrum expanded, the inner and proper petals were not unfolded until 8 days later.

26th	Violet wood sorrel,	*Oxalis Violacia.*
		Ranunculus runcuvatus.
"	Striped Violet,	*Viola Striata.*
27th	Thornbush, Red Haw,	*Cratægus coccinea.*
"	Lilac,	*Syringa vulgaris.*
"	Fœtid buckeye,	*Esculus pallida.*
"	Quamansh,	*Phalangium esculentum.*
"		*Iris cristata.*
29th	Black Whortleberry,	*Vaccinium resinosum.*
"	Meadow rice,	*Thalictrum dioicum.*
"	Barr flower,	*Hydrophyllum Virginicum.*
"	Blue wort,	*Leontin Thalictroides.*
30th	May Apple,	*Podophyllum peltatum.*
"	Mouse ear chick weed,	*Cerastium vulgatum.*

In so vast a region, comprising a vast amount of timber, there is of course, a great variety in the species and quality of that production. The most common kinds are oak, hickory, ash, poplar, cotton wood, walnut, sugar maple, beech, sycamore, buckeye, gum, cypress, cherry, locust, peccan.

Cedar and pine are abundant in the northern regions of some of the tributaries of the Ohio and Mississippi, but are not found in quantities sufficient to be rendered useful, within what may be properly termed the western country. Large quantities of lumber, suitable for building, are prepared on the Allegheny river, and on some of the higher tributaries of the Mississippi, from the cedar and pine of those higher latitudes, and floated in rafts to the more southern districts; by which means all the shores of the Ohio and Mississippi are well supplied with the best description of scantling, plank, and shingles.

The several varieties of the oak are found in almost every part of our country. The heavy timbers for house and ship building, are made of this wood; it is converted into flooring, and other descriptions of heavy plank; and is used in many manufactures of which wood is the material. It is also a very general and excellent material for fuel; and is used by the farmer in fencing, for rails, posts, and plank. There are few localities in which it is not found, nor is there any timber so extensively useful.

The ash is also an excellent wood both for fuel and for plank; it is very abundantly distributed over the whole country, and is much used for a variety of purposes.

Many varieties of the hickory are spread through the whole region. This is considered our best wood for fuel for domestic purposes, but has little other value. The farmers use it for fence rails, but it is neither so easily split, nor so durable as oak or ash.

The black walnut and cherry are hard fine grained woods, used chiefly by cabinet makers, and are sufficiently abundant for the purposes to which they are applied.

Poplar is abundant in some districts, but is not prevalent in the southern parts of the region under description.

The black locust, on account of its durability, is extremely valuable for posts, or for any purpose where the capacity of resisting the action of moisture is required.

The sugar maple is found on our richest soils, both in the upland and bottoms, and is a valuable timber independently of the rich product which it yields to the sugar maker. The season for making the sugar is in February —when the cold frosty nights begin to be succeeded by clear warm days.

The cottonwood resembles the poplar in appearance and texture, and is found chiefly in low alluvion lands, and on the margins of rivers, where it grows to an immense size. The young groves shoot up with uncommon rapidity, and are highly ornamental to the banks which they cover; but the wood is of little value.

The sycamore is seen towering to a great height on the margins of our rivers; but is fortunately not abundant in other localities, as it is entirely useless; as are also the gum, and the buckeye.

The cypress, which is found only in the immense swamps of the southern part of this region, is a white soft wood, which is used for making shingles, and for various kinds of wooden vessels which are made by the cooper or turner.

The peccan is found only at a few points on the Ohio and Wabash near the junction of those rivers, and on the Mississippi near its confluence with the Kaskaskia. It yields a rich delicious nut, which is highly prized, and of which a few hundred bushels have been annually gathered and shipped to New-Orleans. The tree resembles the hickory in appearance, and is of that family.

The oak, the hickory, the beech, and the walnut, afford a prodigious quantity of nuts and acorns, which form the chief part of the *mast*, upon which the immense droves of hogs are subsisted and reared in our forests.

The large quantity of wood used by the steam boats, has made this an article of active and extensive sale, and will very shortly render all the lands bordering on the navigable rivers extremely valuable. The consumption of wood is already so great, that the supply is barely sufficient to meet it, and at some points it is wholly inadequate. The boats are every year increasing rapidly in number, and we know of no branch of business in which the farmer could engage more profitably, than in supplying them with fuel. There is scarcely an acre of uncleared land bounded by the river which will not yield 100 cords of wood—many will yield 150 cords—but experienced men consider the average product 100 cords to the acre, including only such wood as is suitable for steam boats. The price varies from $2 to $3 *per cord*, according to the locality, season, scarcity, &c. so that taking $2,50 per cord as the average, the product of an acre of woodland would be as follows:

100 cords of wood at $2,50 - - - - - -			$250
Deduct for cutting	50 cents per cord,	$50	
hauling	25 " " "	25	
other labor	25 " " "	25	100
Clear gain,			$150

The price at which such land may be purchased, cannot be stated with any precision, as it would vary according to circumstances. But little of the most valuable land on the large rivers remains in the hands of the government; and the private owners have become sensible of its value. Such however is the great variety of soil, situation, and other particulars, that a purchaser may suit himself at any price, from $1,25 per acre, to $100 per acre.

The best kinds of wood for steam boats are oak, beech, and ash. Cottonwood affords a lively fire, but burns away too fast. Hickory which is the best fuel for culinary purposes, is useless for steam boats. on account of the quantity of coals with which it fills the furnaces. The wood for steam boats is required to be split fine, and kept until perfectly dry.

Of domestic animals, the hog is decidedly the most useful and numerous. The meat constitutes a chief article of food, and is used either fresh, or in the form of bacon. The immense droves of hogs which are raised would seem incredible to those who are not familiar with the facts. They are reared most extensively in those districts which are thinly settled, and where they can roam at large over wide tracts of forest. During the spring and summer the owner pays them no other attention than to look after them occasionally, to ascertain the range that they frequent, and to mark the recent litters by cutting their ears. Every farmer has a separate mark, which is recorded in a book kept by the county clerk, and the laws denounce severe penalties upon those who cut off the ears, or alter the marks, of the hogs of others. In the autumn when the *mast* falls, the hogs fatten rapidly, and grow very large. But although they become prodigiously fat, upon the wild nuts, they are not then in a condition to kill for market, as the meat, and especially the fat, of mast fed hogs, is soft, oily, and hard to keep—though not deficient in sweetness or flavor, for present use. They are, therefore, taken home in the autumn, and fed on corn for five or six weeks, in which time the flesh becomes solid, and the lard white and firm. They are then driven to some of the towns on the rivers, where they are slaughtered and prepared for market. One hundred and fifty thousand hogs, are usually killed, in Cincinnati alone, in the course of six weeks in the fall of the year. These may be supposed to average two hundred pounds each, and to sell for from three, to three and a half dollars per hundred—making the sum paid by the pork dealers to the farmers, at this single market, one million of dollars annually. During the last season, however, pork commanded more than double its usual price, and although a less quantity than ordinary was brought to market, the investments at Cincinnati may be stated at a million and a half.

Beef is also raised extensively, and of fine quality. The beeves which are fattened on the prairies, without any other care than that of marking them, and giving them salt as often as they require it, become very fat, though not large. They seldom weigh over six or seven hundred; but the meat is remarkably sweet, juicy, and tender.

In some parts of Ohio and Kentucky, the farmers have turned their attention very successfully to the improvement of their breeds of cattle. Imported animals have been introduced at a great expense, and in sufficient numbers to have already effected a sensible improvement in the stock of large districts. In several counties of each of these states the cattle are decidedly fine, and unquestionably equal to those of any part of the United States.

Horses are raised throughout the west. In Kentucky and Tennessee, great attention is paid to the rearing of blooded horses for the turf, and the saddle, and those states abound in fine and beautiful animals of those descriptions. There are many good blooded horses also in Ohio, but more attention is bestowed here to the rearing of horses for draught. Large numbers of mules are raised in Kentucky, and Missouri.

Sheep raising has been very successfully conducted, wherever it has been attempted with proper care. The sheep do not thrive on the natural pastures, nor without suitable houses to protect them from the weather.

The following extract from a letter to the author, written by Mr. George Flower, an English gentleman, whose intelligence, experience, and probity entitle his statements to entire confidence, are conclusive, upon this subject.

"When Ferdinand the Seventh was detained by Napoleon a prisoner in France, sir Charles Stewart, then envoy from England, purchased six thousand of the finest merinos from the royal flocks of Spain. The haste with which these sheep were driven to the Spanish coast, their crowded state on board ship, and the change of climate and pasture, engendered so much disease and death, that in one year after their purchase in Spain, not more than two thousand remained alive in England. These two thousand were purchased by my father, and for four years were tended with great care and attention by me.

"During this period, I made several purchases of individual sheep from celebrated flocks belonging to the convents of Spain; and particularly from the flock of the monks of Paula.

"In 1817, I emigrated to Illinois, and settled in Edwards county, ten miles from the Wabash, in a pleasant and gently undulating prairie country. I brought with me six rams and six ewes, selected for the fineness of their wool. From these I have bred and increased, ever since. I have also bred from three hundred country ewes, by my merino and Saxony rams. The continued use of fine rams, for seventeen years, has brought the descendants from the country ewes as fine woolled as the original merinos. The flock, from their first introduction up to the present time, have been remarkably healthy. The only disease I have observed amongst them, is the foot rot; about six falling with it in the course of the year, and about the same number with the rot, from pasturing in wet places on the prairie, in the spring of the year.

"My flock now consists of four hundred sheep. Two hundred and sixty of which are ewes; two hundred of them fine woolled, and sixty common and half-blood.

"I have for sixteen years bred my sheep alone, and without any comparison with the eastern flocks, or newly imported sheep from Saxony. It will be a curious fact, if it should so turn out, that the interior of America contains as fine wool as can be found in Spain or Saxony.

"Having given this brief history of the origin, and present number of my flock, I will mention a few facts relative to the cultivation of fine wool, and the new varieties of sheep now possessed by me. Some few years ago, the merino was considered the finest woolled sheep in the world. The Spanish king allowed the elector of Saxony to select a given number of sheep from his flock. The agents of the elector, selected the finest woolled animals, regardless of their form or size. From these, a race of sheep has been reared, producing extremely fine wool, but tender, small, and generally illshaped. These have been bred so long together, that the Saxony sheep have now very different characteristics from the merino. The wool of the Saxony is 20 or 25 cents per pound higher than the merino. When in possession of the 2000 Spanish sheep, I examined with great care, every individual in the flock, and selected from them seventy of extreme and uniform fineness. These were kept in a little flock by themselves, and the manufacturer who purchased the merino fleeces, at a dollar per pound, in the grease, gave for the wool of the selected flock, two dollars per pound. Are there any manufacturers of shawls, or extra fine cloths, in the United States, that will give an extra price for extra fine wool? I have now five breeds of fine woolled sheep, in my flock, suitable for different soils, and whose wool is adapted for different manufactures. The merino and Saxony, both too well known to need description. The Illinois grazier, a most useful race of sheep, perhaps more generally useful as a substitute for the common sheep of the country than any other. It is a short-legged, stout sheep, with a long-stapled soft wool, alike acceptable to the manufacturer and the housewife. It will live and thrive on the richest, as well as the poorest land. It fattens easily: its mutton is excellent. The second variety I call the prairie down, bearing a strong similarity to the celebrated breed of 'south downs,' in England, but clothed with the finest fleece. This breed is entirely without horns, and divested of the loose skin about the throat and chest, that has so much disfigured the merinos. The whole appearance of this sheep is neat, with a form sufficiently broad for easy fattening. This breed should be kept exclusively upon high ground and fine herbage."

In the neighborhood of Steubenville and Wheeling, and at several other points sheep have been raised in large numbers, and with great success; and there remains no doubt of the adaptation of our climate to this animal.

CHAPTER XI.

The public Domain.

The *public domain*, as it is called, consists of the lands belonging to the general government, as distinguished from the unimproved lands, belonging to the individual states, or private owners. They have long occupied much of the attention of Congress, and there is reason to believe that the legislation of that body in respect to them, is likely to assume hereafter a higher importance, and a more delicate character, than it even now presents. It is only necessary to notice the fact, that in all the western states, which lie beyond the Ohio, the Union is the proprietary of the vacant lands, in order to suggest the intricate relations which are likely to grow up between the general and state governments. To those who view these questions in their probable effect upon *state rights*, the subject assumes a fearful interest; but we do not profess to be among those, nor to entertain any doubt, that the well-balanced powers of the general government, on the one hand, and of the respective states, on the other, will be maintained in their original integrity, as long as the confederacy shall endure. Nor is it our intention, in the remarks which we shall make, to advocate any local interest, or to advance the dogmas of any political sect; our object being simply to state the subject, in its various bearings, by presenting some of its most prominent details, with such information relative to the actual condition of the country, as may be properly connected with it.

In the western states, this subject has for many years presented a topic of animated public discussion. It is here a matter of vital interest, and is every year growing in influence, and expanding in magnitude; and the time is fast approaching, when political aspirants, whatever may be their principles in other respects, will be required to be orthodox upon this all absorbing question. Yet the politicians of the west are by no means unanimous; and although the popular voice has given currency to a few leading propositions, the minds of intelligent men are much divided as to the course of policy to be pursued by the government, in the disposition of the public domain.

It should be recollected, that a very large majority of the western population, and of the emigrants to the new states, are farmers, and that very few of these are willing to be the tenants of other men. They nearly all are, or desire to become, freeholders: and as there are few other lands in market than those of government, the price and conditions of sale of the public domain, are to them topics of immediate importance.

By a calculation lately submitted to Congress by one of its committees, and founded on evidence which seems conclusive, it appears probable, that in 1860 the population of the United States will be *thirty-two* millions, of which *fourteen* millions will be contained in the Atlantic states, and *eighteen* millions in the western states. Thus the inhabitants of the Atlantic states, having now the majority in Congress, are legislating upon the interests of those, who, in less than thirty years will have acquired the right, and the power, to exercise a controling influence in the national legislature, and who, from a dependent condition, will have arisen to complete sovereignty. Where the population of a country is thus rapidly increasing—where that increase tends inevitably to a transfer of power from one section of the Union to another—and where the anticipated change is so near at hand, that individuals of the present generation may live to witness its accomplishment, every measure which bears upon the subject becomes deeply interesting. Of such measures, those which relate to the sale and ownership of the public lands, seem to have the most direct operation upon the growth of the new states and territories, a very large majority of the emigrants to such countries, being agriculturalists, who would not settle upon the soil in any other condition than as its proprietors.

It will be readily seen that this is precisely the kind of subject which is calculated to awaken sectional feelings, and upon which, therefore, a great diversity of opinion may prevail. That discordant ideas concerning it are prevalent, is becoming every day more and more obvious; and the public domain is now viewed in different lights by different politicians. Some consider it as a source of revenue, to be disposed of to the best advantage for the national treasury; others contend that it should be put to sale in the manner best calculated to promote emigration to that quarter; a third class, and the most numerous, are willing to make a liberal compromise between the two former opinions; while a fourth, few in number, deny the right of the United States to the fee simple of any lands lying within the limits of a sovereign state.

The subject, therefore, naturally divides itself into two branches of inquiry;—1. As to the title of the United States to the public lands; and 2. As to the policy pursued in its disposal.

1. *The title of the United States to the public lands.*

At the formation of the Federal Government, all the lands not owned by individuals, belonged to the states respectively, within whose limits they were situated; for as that government consisted of a confederacy of states, each of which retained its proprietary rights, and proper sovereignty, the United States acquired by the Union no property in the soil. The uninhabited wilds lying to the west, and as yet not clearly defined by established boundaries, were claimed by the adjacent states, and portions of them by foreign nations under conflicting claims, but all subject to the paramount Indian title. The title therefore, of the United States to that country is derived: 1. From treaties with foreign nations; 2. From treaties with the Indian tribes; and—3. From cessions by individual states, members of the Union.

The treaties with foreign nations, by which territory has been acquired, are those of 1783 and 1794 with Great Britain, of 1795 and 1820 with Spain, and of 1803 with France. It is sufficient to say of these treaties, that by them we acquired Louisiana and the Floridas, and extinguished all the claims of foreign nations to the immense regions lying west of the several states, and extending to the Pacific ocean.

The lands east of the Mississippi, and contained within the boundaries designated by the treaty with Great Britain of 1783, were claimed by individual states, and the title of the United States to that territory is derived from cessions made by those states.

These cessions embrace three distinct tracts of country.

1. The whole territory north of the river Ohio, and west of Pennsylvania and Virginia, extending northwardly to the northern boundary of the United States, and westwardly to the Mississippi, was claimed by Virginia, and that state was in possession of the French settlements of Vincennes and Kaskaskia, which she had occupied and defended during the revolutionary war. The states of Massachusetts, Connecticut, and New York, set up, to portions of the same territory, claims, which though scarcely plausible, were urgently pressed upon the consideration of Congress. The United States, by cessions from those four states, acquired an indisputable title to the whole. This tract now comprises Ohio, Indiana, Illinois, and Michigan.

2. North Carolina ceded to the United States all her vacant lands lying west of the Allegheny mountains within the breadth of her charter. This territory is comprised within the state of Tennessee.

3. South Carolina and Georgia ceded their titles to that tract of country which now composes the states of Alabama and Mississippi.

The United States having thus become the sole proprietary, of what have since been called the public lands, the nation was rescued from evils of the most threatening and embarrassing aspect. The claims of foreign nations, adverse to our own, to the broadly expanded regions lying west of the several states, and extending to the Pacific, were extinguished—depriving those nations of all excuse for tampering with the Indians upon our border, and rescuing our frontier from the dangerous vicinity of foreign military posts. The boundaries of the then frontier states were defined, and they were prevented from growing to an inordinate size, and acquiring an undue preponderance in the government—the interfering claims of several states to the same territory were silenced—but above all, the general government, in acquiring the sole jurisdiction over the vacant lands, was enabled to establish an uniform system for their settlement, and the erection of new states. To the latter, admission into the Union upon terms of perfect equality with the older members of the confederacy, was secured; while the land was offered to the settler at a fair price, and under an unexceptionable title. The disinterested policy of the states which made these liberal cessions cannot be too highly applauded. Virginia, in particular, displayed a magnanimity which entitles her to the lasting gratitude of the American people; her territory was by far the largest, and her sacrifice to the general good the noblest. It was disinterested, because she reserved no remuneration to herself.

The cession by Virginia is the most important, not only on account of the magnitude of the country ceded, but in regard to the conditions imposed on the United States respecting its future disposition. It is provided in that compact, "that all the lands within the territory so ceded to the United States, and not reserved for special purposes, shall be considered as a common fund, for the special use and benefit of such of the United States as have become, or shall become, members of the confederation or federal alliance of said states, Virginia inclusive, according to their usual respective proportions in the general charge and expenditure, and shall be faithfully, and *bona fide* disposed of for that purpose, and for no other use or purpose whatsoever." It is also provided, that, "the said territory shall be divided into distinct republican states, not more than *five*, nor less than *three*, as the situation of that country and future circumstances may require; which states shall hereafter become members of the Federal union, and have the same rights of sovereignty, freedom and independence, as the original states."

The reservations made by Virginia, were, "That the French and Canadian inhabitants, and other settlers of Kaskaskies, St. Vincents, and the neighboring villages, who have professed themselves citizens of Virginia, shall have their possessions and titles confirmed to them, and be protected in the enjoyment of their rights and liberties," and a quantity of land, which Virginia had promised to General George Rogers Clarke, and to the officers and soldiers who served under him in the reduction of the French posts, was reserved within the ceded territory, for the purpose of fulfilling the stipulations of that agreement. This cession was made in 1784.

As we shall comment upon the Ordinance passed by congress in 1787, for the government of the northwestern territory, in another place, we shall only notice here, that part of it which relates to the public lands. It is comprised in the two following clauses:

"The legislatures of those districts, or new states, shall never interfere with the primary disposal of the soil by the United States, in congress assembled, nor with any regulations congress may find necessary, for securing the title in such soil to the *bona fide* purchasers."

"No tax shall be imposed on lands the property of the United States; and in no case shall non-resident proprietors be taxed higher than residents."

In the constitution of the United States, it was further declared, that, "The congress shall have power to dispose of, and make all needful rules and regulations respecting the territory or other property of the United States;" and thus the sanction of the whole people was given to the acts of the confederated government, and their compacts with states, and the title of the general government to the public lands, recognised.

The treaties with the Indian tribes, for the extinguishment of their titles to different tracts of country, have been numerous. Those tribes are recognised, in some respects as independent nations. They are governed by their own laws, and are acknowledged to have the right to sell their lands, or to occupy them at their option. The general government claims the right of pre-emption, and forbids the sale of Indian lands to other nations, or to individuals. But in no instance have those lands been surveyed, or offered for sale, antecedently to their purchase from the Indians, nor has any compulsion ever been used, to extort from the latter, any portion of their territory. In several instances, the same land has been purchased from several different tribes, in others, it has been bought more than once from the same tribe, so liberal has this government been in its policy, and so careful to avoid even the appearance of injustice.

No portion of the Indian lands has ever been claimed by our government, under the usages of war. The treaty of Greenville, made by General Wayne in 1795, at the head of a victorious army, with the chiefs of the tribes who had just before been vanquished by him in battle, is one of the first in date, in reference to the public domain, and affords sufficient evidence of the early adoption of a pacific and just policy by our government. Nothing is claimed in that treaty by right of conquest. The parties agree to establish perpetual peace—the Indians acknowledge themselves to be under the protection of the United States, and not of any foreign power—they promise to sell their land to the United States only—the latter agrees to protect them, and a few regulations are adopted to govern the intercourse which shall ensue. A boundary line is established by which the Indians confirm to us large tracts of land, nearly all of which had been ceded to us by former treaties; and the United States agrees to pay them in goods to the value of $20,000, and to make them a further payment of $9,500 annually. Most of the treaties subsequently made, have been framed on this model.

In the year 1803, President Jefferson in a letter to the Governor of Indiana, makes use of the following language: "Our system is to live in perpetual peace with the Indians, to cultivate an affectionate attachment from them, by every thing just and liberal we can do for them, within the bounds of reason, and by giving them effectual protection against wrongs from our own people." The system thus early adopted, has been invariably pursued; however the views of the government may have been misunderstood, or the faith of treaties violated, by individuals, the action of congress and of the cabinet, in the extinguishment of Indian titles, has been benevolent and uniform. The legislation of some of the states, has been less equitable, and should not be confounded with that of the general government.

As a considerable part of the country which is now held by the United States, as public lands, had been subject to several foreign powers successively, portions of it were claimed by inhabitants and others, either by right of occupancy, or by titles said to be derived from those several governments, or from the local authorities acting under them. To investigate such claims, boards of commissioners have been appointed by various acts of congress, to act within the several territories, whose powers and duties have been modified according to the nature of the claims to be examined before them; some having final jurisdiction, while others were only authorized to investigate and report the facts, with their opinion. But the intention of the government, seems uniformly to have been to guard against imposition—to confirm all *bona fide* claims derived from a legitimate authority, even when the title had not been completed—to allow claims founded on equitable principles—and to secure in their possessions all actual settlers, who were found on the land when the United States became the proprietary of the country in which it was situated, although they had only a right by occupancy.

So far then as a title by purchase could be gained, that title has been acquired by the Federal Republic. She has extinguished every title which could be possibly set up, as adverse to her own; namely, those of foreign nations, those of the Indian tribes, and those of such states as possessed or alledged them; and she has confirmed to individuals, every acre to which the plausible shadow of a right could be shewn, either in law or equity.

The validity of those purchases, or of the rights acquired under them, has never been disputed; but since the acquisition of that territory, portions of it have been erected into separate states, which have been admitted into the Union, and it has been contended in Congress, and elsewhere, that by the act of admitting a state into the Union, the government forfeits her claim to the unsold lands within the boundaries of such state. It is argued that under the laws of nations, "*the sovereignty of a state* includes the right to exercise supreme and exclusive control over all the lands within it"—that, "the *freedom of a state*, is the right to do whatever may be done by any nation, and particularly includes the right to dispose of all public lands within its limits, according to its own will and pleasure"—and that sovereignty and freedom are inseparable from the condition of an independent state. It is urged, that the original states possess supreme and exclusive control over the lands within *their* limits, and that the new states being by compact invested with "the *same* rights of freedom, sovereignty, and independence, with the *other* states," the right to dispose of the soil is among the attributes of sovereignty thus guarantied to them. It is contended that the Federal Government cannot hold lands within the limits of a state, because that power has not been expressly given by the Constitution, except in the case of "places purchased by the consent of the legislature of the state in which the same shall be, for the erection of forts," &c.; and that the power of disposing of the soil, not being given, is reserved to the states respectively. That section of the Constitution which declares that "Congress shall have power to dispose of and make all needful rules respecting the territory, or other property belonging to the United States," is said to be "clearly adapted to the territorial rights of the United States, beyond the limits or boundaries of any of the states, and to their chattel interests," and therefore not applicable to this question.

The objections thus raised were ingenious, and the immense magnitude of the rights and value of the property involved, gave them for the moment a serious and imposing aspect. But it was easily discovered on examination, that they were unsound and merely specious. The claim thus set up for the new states found few advocates. On the floor of Congress its existence was brief, its death sudden, its fate unlamented. In the public prints it was scarcely noticed, except to be briefly disapproved. Notwithstanding its *ad captandum* character, it failed to become popular, even in the country where it originated.

An objection which seems not to have occurred to its authors, was too obvious to escape the common sense of a people, alive to their own interests, and intelligent in all that concerns their rights. The government has the same title, and neither more nor less, to the unsold lands in the several states, which she had at the moment after the admission of those states into the Union. If her title is defective now, it was equally so at that time; and every sale made in any new state since its admission, is illegal. The great mass of land titles in the new states, would, by the admission of this doctrine, become unsettled. Of the million of inhabitants of Ohio, a vast proportion of the freeholders would become intruders on public land. The people are too intelligent to submit to such an outrage, the states too just to open a door for the ingress of such a flood of misery, confusion, and fraud, as would sweep over the land in the event of a consummation so devoutly to be deprecated. It is a singular coincidence, and one perfectly conclusive, of the little faith reposed by any in this claim, that the legislatures of those states, which have wholly or partially sanctioned this doctrine, have invariably, at the same sessions, distinctly denied it in their acts of ordinary legislation, by the passage of laws recognising "the lands of the United States" *eo nomine*, by the adoption of memorials to Congress, asking for grants, and by various other substantive recognitions, both direct and incidental.

It is obvious too, that if this question can be said to have now any definite existence, its importance must be hourly decreasing. Every acre of land that is sold, diminishes the amount in controversy, and every creation of a freeholder adds to the number of its interested opponents. It may not however be uninteresting to state a few of the points which are very properly urged against this singular claim.

The cessions by Virginia and the other states, were made antecedently to the adoption of the Federal Constitution; and having been ratified in the manner prescribed by the articles of confederation, the title vested in the United States was valid, for the purposes expressed in the several deeds of cession. The Federal Constitution having been subsequently adopted, the clause giving to Congress the "power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States," must have had reference to the *territory* and *other property then held*, and of course, vested in Congress the power to dispose of the lands in question, and to make all needful rules and regulations respecting them. When, therefore, the people inhabiting those territories applied for admission into the Union, it was competent to Congress, having power to legislate on the subject matter, to make conditions reserving her own proprietary rights. Such conditions were made with all the new states, as will be seen by inspecting their several constitutions. Those constitutions were submitted to Congress for its ratification, and of course have the binding effect of compacts, as between the parties. In all of them, the proprietary character of the United States, is distinctly recognised, large quantities of land are transferred by the United States, to the states respectively, for specific purposes, and accepted by the latter, and equivalents reserved to be paid to the United States in return. Subsequently to their admission into the Union, all of those states have been applicants to Congress for *donations* of land lying within their respective limits, and all of them have received large grants of such land.

It may be remarked also, that the laws of nations have no binding effect as between the members of a confederacy, or as between a confederated nation and one of its members, when those laws come into contact with the internal policy, statutes, or compacts of such nation. Every nation has a right to regulate its own affairs, and to govern, or to make compacts with, its own members, without respect to the laws of nations, which could in such cases, only be appealed to, where foreign states, not parties to the laws or compacts so made, should be affected by them. Whatever, then, might have been the situation of those lands under the laws of nations, if no legislation had taken place respecting them, a widely different case is presented, when, by solemn acts, by express laws, and long acquiescence, the proprietary rights of the parties have been clearly settled, and distinctly recognised.

It is understood, that the United States can assume no sovereignty over any of the new states, or over her lands within such state, other than such as is strictly proprietary. Her title gives her no civil jurisdiction. She can claim no taxes, exact no obedience, other than she may demand from the citizens of all other states. She simply holds her property, with the right to sell and convey the same at her own pleasure, and with power to make needful rules and regulations for its disposition. The freedom, sovereignty, and independence, of the New States, are therefore not infringed; and if it be admitted that the right to dispose of the soil within its limits be incident to the sovereignty of a state, it is replied, that such right applies only to waste, unoccupied or vacant land, and that our states cannot exercise such a power over lands, which before their admission into the union, were held in fee simple, by the United States, or by individuals. It is not denied that the title of the United States, as originally acquired, was a good one; that those who have purchased from her, lands within the limits of a state, previously to the erection of that state, hold titles equally valid; and that those titles cannot now be modified, narrowed, or abrogated, by any legislation. Suppose, then, that previous to the admission of any one of the new states into the union, the United States had sold to an individual, all her land remaining undisposed of within the limits of a state so about to be admitted, would not that sale have been valid? would not the title of the purchaser of a thousand of tracts, have been as indefeasible as that of the buyer of a single tract? would the admission of the state into the union, have affected the property of any such purchaser? If these propositions be answered in the manner in which we suppose they must be, it is difficult to perceive how or why the United States, having the privilege to sell or retain her own undisputed property, should by electing to hold it, be thereby placed in a worse situation than her grantee would have occupied had her election been different.

It is further urged, that the territory alluded to, was purchased with the treasure of the United States, that it has been protected, surveyed, and brought into market at the expense of the nation, and that by the express stipulations of the cessions from the several states, that territory was set apart "as a common fund for the use and benefit of" all the states, "according to their usual respective proportions in the general charge and expenditure." There was therefore a consideration given for the lands, and an use specifically reserved; the states subsequently admitted became parties to this as well as to all other public treaties, compacts, and laws, of the union; and they accepted the territory allotted to them respectively for the exercise of their state sovereignty, subject to its encumbrances.

Other arguments have been used, in reference to this subject which we think it needless to repeat. Some of them are founded on considerations of expediency rather than of right; and many of them appeal to sectional prejudices and local interests, which we have studiously abstained from bringing into view; preferring to narrow down our abstract into a naked statement of such prominent facts and suggestions as may place before the reader the leading features of this inquiry. We proceed therefore to consider:

2. *The policy adopted by the government in the disposal of the public domain.*

In 1787 the Ohio company purchased a large tract from congress; which body having adopted no system for the sale of lands, or the settlement of the western country, seemed disposed to favour the mode of parceling out her wide domains in extensive grants. The purchase of the Ohio company comprehended one million and a half of acres. Joel Barlow was sent by them to Europe to sell these lands; and to facilitate his operations a subordinate company was formed, called the Sciota company, to whom the lands were conveyed. Mr. Barlow made considerable sales to individuals and companies in France, and many emigrants came to this country, who would have been ruined by the bad faith of the company, had not the government generously interfered in their behalf.

In 1789, Mr. John Cleves Symmes contracted with congress, for the purchase of a million of acres of land, between the great and little Miami; but in consequence of a failure on his part, to make the stipulated payments, did not become the proprietor of so large a tract, the patent which finally issued to him and his associates, included only 311,682 acres, of which only 248,540 became private property; the remainder consisting of reservations for a variety of public purposes, chiefly for the use of schools and the support of religion.

The remark that occurs to us most forcibly, in reverting to this portion of history, is the improvidence of congress, in making so large a grant of lands to individuals Happily for the country, the instances of such extensive grants were few; and it is perhaps equally matter of congratulation, that they did not, in any instance, yield to the individuals concerned in them, advantages sufficiently great, to render the applications for such monopolies numerous or influential. It is, perhaps, chiefly in consequence of this fact, that the evil was avoided; for it does not appear, that congress was at first aware of the calamitous results which must have followed the parceling out of this noble region to a few wealthy proprietors, whose interests would often have been hostile to those of the people. This principle, however, was not at first understood. We can easily see why the foreign sovereignties, under whose sway we were originally placed, should have made, as they frequently did, extensive grants of land to individuals or companies; but it is a little singular, that our own government should have fallen into the same misguided policy. The earliest law passed by congress, for the sale of the lands of the United States, provided for its disposal to purchasers in tracts of four thousand acres each; and did not allow the selling of a smaller quantity, except in case of the fractions created by the angles and sinuosities of the rivers. The law was highly unfavorable to actual settlers, as it prevented persons of moderate property from acquiring freeholds; and would have enabled persons of wealth to become proprietors, and to sell the land to the cultivator at exorbitant prices, or else have forced the latter to be tenants under the former. With the notions that many of our statesmen had derived from Great Britain, and which notwithstanding the recent rupture of our connection with that country, still remained impressed upon us, with all the force of education and association, it is perhaps not surprising, that they should have deemed it advantageous to create a landed aristocracy; but it is more probable, that the error arose from accident and carelessness. It is curious, however, to look back at these first awkward attempts at republican legislation, and to see how gradually we shook off the habits of thought in which we had been trained, and how slowly the shackles of prejudice fell from around us.

In a report of Mr. Hamilton, Secretary of Treasury, dated July 20, 1790, he advises, the following system:—

That no land shall be sold except such in respect to which the titles of the Indian tribes shall have been previously extinguished.

That a sufficient tract shall be reserved and set apart for satisfying the subscribers to the proposed loan, in the public debt, but that no location shall be for less than 500 acres.

That convenient tracts shall from time to time be set apart for the purpose of locations by actual settlers, in quantities not exceeding, to one person, 100 acres.

That other tracts shall from time to time, be set apart for sales in townships of ten miles square, except where they shall adjoin upon a boundary of some prior grant, or of a tract so set apart, in which cases there shall be no greater departure from such form of location than may be absolutely necessary.

That any quantities may nevertheless be sold by special contract, comprehended either within natural boundaries, or lines, or both.

That the price shall be 30 cents per acre to be paid either in gold or silver, or in public securities, computing those which shall bear an immediate interest of 6 per cent, as at par with gold and silver; and those which bear a future or less interest, if any, shall be at a proportional value. That certificates issued for land upon the proposed loan shall operate as warrants within the tract or tracts which shall be specially set apart for satisfying the subscribers thereto, and shall also be receivable in all payments whatever for lands by way of discount acre for acre.

That no credit shall be given for any quantity less than a township of ten miles square, nor more than two years credit for any less quantity.

That in every instance of credit, at least one quarter part of the consideration shall be paid down, and security other than the land itself, shall be required for the residue. And that no title shall be given for any tract or part of a purchase, beyond the quantity for which the consideration shall be actually paid.

That all surveys of land shall be at the expense of the purchasers or grantees.—

The first step towards a change in that objectionable system, which contemplated sales in large tracts, and on credit was the passage of the act of the 10th of May 1800, which provided for the sale of land in sections and half sections. Previous to that time no more than 121,540 acres had been sold, in addition to the sale to Symmes: namely, 72,974 acres, at public sale in New York in 1787, for $87,325, in evidences of public debt; 43,446 acres, at public sale at Pittsburgh in 1796 for $100,427; and 5,120 acres at Philadelphia in the same year, at two dollars per acre.

The plan of selling land in sections and half sections, the former of 640 acres, and the latter of 320 acres, was first proposed in congress, by General William H. Harrison, when a delegate from the northwestern territory, in 1799, and produced a sensation which shewed how little mature thought had been bestowed on the subject in that body. The law was certainly one of the most beneficial tendency; and its passage constitutes an epoch in the history of this country, of perhaps greater magnitude and interest than any other in our annals; for no act of the government has ever borne so immediately upon the settling, the rapid improvement, and the permanent prosperity of the western states. The ordinance of 1787, is justly regarded as an instrument of vast importance, and singularly propitious consequences; but in its practical operation and salutary results, it sinks in comparison with the system of selling the public domain, which has placed the acquisition of real estate within the reach of the labor-ing classes, and rendered the titles to land perfectly secure. It is understood, that this act was not the exclusive production of General Harrison; the discriminating genius of Mr. Gallatin, then a member of congress, was also employed in its production; and although the earnest request of that distinguished citizen, and the circumstances of the moment, forced Mr. Harrison to submit to the credit of being its sole author, the natural ingenuousness of the latter, induced him, subsequently, when he could do so with propriety, to explain his own part in the proceeding, and to give Mr. Gallatin the honor due him. The bill was warmly attacked by some of the ablest men in the lower house. Mr. Harrison defended it alone; he exposed the folly and iniquity of the old system; demonstrated that it could only result to the benefit of the wealthy monopolist, while the hardy and useful population, which has since poured into the fertile plains of Ohio, and made it, in thirty years, the *third* state in the Union, must have been excluded from her borders, or have taken the land on terms dictated by the wealthy purchasers from the government.

In 1802 a convention was held at Vincinnes, of which General Harrison was president, at which a petition was adopted, praying of congress, that a provision of one 36th part of the public lands within the territory of Indiana, be made for the support of schools within the same; and on the 2nd of March succeeding, Mr. Randolph, the chairman of a committee to whom this subject was referred, made a favorable report. This was the commencement of our beneficent system for the support of public schools.

As early as 1803, petitions were presented to congress praying for various improvements or changes in the mode of selling lands, among which the most prominent suggestions were, To sell the land in smaller tracts—to charge no interest on sales—to sell for cash—to reduce the price—and to make grants of small tracts to actual settlers.

On the 23d January 1804, a report was made in the House of Representatives, recommending the reduction of the size of the tracts, and the sale of quarter sections in the townships which had before been offered in half sections, and the sale of half sections in those which had been offered in whole sections.

The present admirable system of selling the public lands, may be dated as having commenced with the act of May 10, 1800, though several important improvements have been made since that time. It is not necessary to notice all these changes. All the lands within each district, are surveyed before any part is offered for sale; being actually divided into *townships* of six miles square, and each of these subdivided into thirty six *sections* of one mile square, containing six hundred and forty acres each. All the dividing lines run according to the cardinal points, and cross each other at right angles, except where fractional sections are formed by large streams, or by an Indian boundary line. These sections are again divided into *quarter*, *half quarter*, and *quarter* quarter sections, containing 160, 80, and 40 acres respectively, of which the lines are not actually surveyed, but the corners, boundaries, and contents, are ascertained by fixed rules prescribed by law. This branch of business is conducted under two principal surveyors, who appoint their own deputies. The sections in each township are numbered from 1 to 36, the townships are placed in ranges, and also numbered. The surveys are founded upon a series of true meridians; the *first principal meridian* is in Ohio, the second in Indiana, the third in Illinois, &c., each forming the base of a series of surveys, of which the lines are made to correspond, so that the whole country is at last divided into squares of one mile each, and townships of six miles each, and these subdivisions arranged with mathematical accuracy into parallel ranges.

This system is as simple, as it is on several accounts peculiarly happy. Disputes in relation to boundaries can seldom occur where the dividing lines can be at all times corrected by the cardinal points; where the same line being extended throughout a whole region, is not dependent on visible marks or corners, but can readily be ascertained at any moment, by calculation and measurement; and where one point, being ascertained, furnishes the basis for an indefinite number of surveys around it. Such lines too, are easily preserved, and not readily forgotten.

A vast deal of accurate and useful information is furnished to the public through the medium of this system. The whole surface of the country is actually surveyed and measured. The courses of the rivers and smaller streams are accurately ascertained and measured, through all their meanders. Our maps are therefore exact, and the facilities for measuring distances remarkably convenient. Many of the peculiarities of the country are discovered, and its resources pointed out, in the course of this minute exploration; and a mass of well authenticated facts are registered in the proper department, such as the topographer can find in relation to no other country.

After the land has been surveyed, districts are laid off, in each of which a land office is established, and on a day appointed by the President, the whole of the land is offered at public sale, to the highest bidder; but not allowed to be sold below a certain *minimum* price. Such tracts as are not sold at that time, may at any time afterwards, be purchased at the *minimum* price, at private sale.

From all the sales, one *thirty-sixth* part of the land, being one entire section in each township, is reserved, and given in perpetuity for the support of schools in the township; section No. 16, which is nearly central in each township, is designated by law, for that purpose In each of the new states and territories one entire township, containing 23,040 acres, (and in some instances two townships) has been reserved, and given in perpetuity to the state, when formed, for the support of seminaries of learning of the highest class. Five per cent. on the amount of the sales of land within each state, is reserved three-fifths of which is to be expended by Congress in making roads leading to the state, and two-fifths to be expended by such state in the encouragement of learning. All salt springs, and lead mines, are reserved, and leased by the government, but many of these have since been given up to the states.

The lands reserved for schools and seminaries of learning, have never been considered as gratuitous grants to the states receiving them; each of these states having made ample remuneration to the general government. Illinois, for example, agreed that all lands sold by the United States, within that state, should remain exempt from taxation for five years after such sale, and that lands granted for military services, should remain exempt from taxation for three years, if held so long by the patentees. The taxes thus relinquished by that state, will have amounted, when all the lands in its limits shall be sold, to near a million of dollars.

The business of the land office, in each district, is transacted by a Register, and a Receiver, by the first of whom the land is sold to individual purchasers, while the other receives the money. These officers are entirely independent of each other, their duties distinct, and their responsibilities separate. They are required to keep similar books of account, and to make respectively, periodical reports to the General land office at Washington —the one of his sales, the other of his receipts; so that the offices operate as checks on each other; and as neither has any pecuniary interest in the fidelity of the other, there is no temptation to collusion. They each keep plots of all the land in their district, sold or unsold, on which each tract is distinctly marked and numbered, so that the purchaser in making his selection may examine for himself. No discretion is vested in the land officers, in reference to the sale: the purchaser having selected his tract, or as many tracts as he may desire, they have simply to discharge the ministerial duty of receiving the money, and granting the evidence of title.

Previous to the year 1820, the price demanded by government for its land, was two dollars per acre, one fourth of which was paid at the time of purchase, and the remainder in three equal annual instalments; a discount of eight per cent. being allowed to the purchaser, if the whole was paid in advance. This arrangement, however liberally intended, was found to be productive of great mischief. The relation of debtor and creditor, can never be safely created, between a government and its citizens. If the citizen is creditor, his demands are as exorbitant, as his power to enforce payment is inefficient, and the claim which should be made to the justice, becomes an appeal to the generosity, of the debtor. If the government is creditor, the moral obligation to pay, is lightly felt, and the legal obligation leniently enforced. The debtor expects indulgence, and makes his contract under that expectation. He enters into an engagement with less circumspection than he would use if dealing with an individual, under the belief that he will not find in the government a rigid creditor; and under the same conviction neglects to make any strenuous exertion to comply with his contract. The selling of the public lands, therefore, on a credit, was shewn by experience to be unwise. The country was new, the soil fine, and the spirit of emigration active. Large purchases were made by individuals, who had not the means of payment. Persons who had only money enough to pay the first instalment on one or more tracts, disbursed their whole capital in making the prompt payment required at the time of entry, depending on future contingencies for the power to discharge the other three-fourths of their liabilities. This was done, in most cases, without the least intention to defraud; the risk of loss being entirely on the side of the purchaser, and the allurement to make the venture, such as few men have the resolution to withstand. A rapid increase in the value of lands was generally anticipated, and many expected to meet their engagements by selling a portion of the land at an enhanced price, and thus securing the portion retained; some were enticed by a desire to secure choice tracts, and others deluded by the belief that they could raise the sums required, within the appointed time, by the sale of produce made on the soil. A few, by industry, or by good fortune, realised these anticipations, but a great majority of the purchasers, at the expiration of the term limited for the payment of the last instalment, found their lands subject to forfeiture for nonpayment. Instead of rising, the price of land had fallen, in consequence of the vast quantities thrown into the market; and the increase in the amount of produce raised, so far exceeded the increase of demand for consumption, that the farmer was unable to realise any considerable profit from that source, while the expenses of clearing and improving his farm required both labor and money. Money was scarce, the country was new, without capitalists, moneyed institutions, or manufactures, and with little commerce; and while the sale of lands, and the importation of foreign goods, required to supply the wants of the people, constituted an immense and an eternal drain of the circulating medium, across the mountains, the industry of the people was not yet brought into action, nor the resources of the country developed, to a sufficient extent to afford the means of bringing the money back. Ours was a population of buyers. The demand for money induced the establishment of local banks, whose notes were at first eagerly taken, but soon depreciated, having the usual effect of driving better money out of circulation, without substituting any valuable medium in its place. Bank debts were added to land debts.

This state of things existed chiefly from 1814 until 1820. Previous to the former period, the war had created an unnatural excitement, unusual expenditures were made, and activity was given to some branches of business; and it was to sustain the business which had grown up during the war, that local banks were created. The most of these banks were authorised to commence business when one-fifth of their nominal capital had been paid in; which provision, liberal as it was, was not strictly complied with—the same specie being used for several banks, and only remaining in the vaults of each sufficiently long to enable the proper officers to certify that the requisitions of the law had been observed. A period of distress occurred which reached its lowest point of depression in 1819.

The whole population trembled upon the brink of ruin; and had the federal government proved a rigid creditor, this extensive and beautiful country must have presented a vast scene of desolation. The purchasers of land had become settlers; they had built houses and opened fields upon the soil, the legal title to which remained in the government. A few could have saved their homes by the disposal of other property; the many could not purchase the roof that sheltered them, at any sacrifice which they might have been willing, or perhaps able, to make. Yet it is not to be inferred that the people were destitute, or desperately poor; far from it—they were substantial farmers, surrounded with all the means of comfort and happiness—except *money*. To have driven such a people to extremity, would have been ungenerous and fatally unwise; for now that the crisis has passed, we may say without offence or danger, that there is no calculating the extent of the private misery, and the public convulsion, which such a policy would inevitably have produced. The enlightened statesman, (Mr. Crawford,) who at that time presided over the Treasury department, saw, and properly estimated the wants and feelings of that part of the community, together with the relative duty of the government. A system of relief was devised, which, by extending the time of payment, and authorising purchasers to secure a portion of their lands by relinquishing the remainder to the government, in the course of eight years extinguished a large portion of those debts, and has eventually, it is believed, absorbed the whole, without injury to the citizen, and with little loss to the government.

This subject affords a theme of proud felicitation to the American patriot, as it exhibits an evidence of the permanency of our institutions. It is not easy to imagine a crisis more perilous than the one to which we have alluded. It is dangerous to threaten a high spirited people with expulsion from their homes; and the law which forfeited the lands of the western people upon the non-performance of their contracts, held out this alternative. But under these appalling circumstances, not a shadow of disaffection was exhibited in the west; the people neither threatened nor murmured, but looked up to their government for relief, with a confidence which remained unshaken to the last. They retained their loyalty and their temper, petitioned Congress in an independent tone, and awaited the result with manly firmness. From the debates on this subject in Congress, no one would have guessed the magnitude of the interests at stake, or the powerful and intense feelings of anxiety enlisted in the discussion. The deportment of all the parties was as temperate, as the decision was just and judicious.

Upon granting relief to the land purchasers, the credit system was abolished; and lands are now sold by the government at one dollar and twenty-five cents per acre, payable in cash. This plan has had a more wholesome operation; and the only difference which now exists, has reference to the price of land. To this two objections have been made; 1st, that the same price is demanded for all lands, without respect to the endless diversity of value occasioned by differences of soil and situation: and 2nd, that the price is in all cases too high.

That the first is a valid objection, is indisputable; but it is not easy to suggest a remedy less objectionable. To divide the land into classes, varying in their actual value, as well as in price, would perhaps be impracticable. Under such a system, there must be an actual inspection of each separate tract, the cost of which would often exceed the value of the land. The persons appointed to make such valuation must be numerous, and each would have a separate standard of his own, by which to estimate the advantages and disadvantages of soil, climate, position, &c., which the various tracts of land would present. An endless scene of confusion would ensue. There would be diversities of price, without any corresponding diversities of value. An imaginary value would be given to one tract, while another would be unreasonably depreciated. The person who wished to purchase would think that an exorbitant price had been attached to the spot selected by him; while the man who had already bought, would conceive that his own lands were reduced in value by the low estimate affixed to those adjoining him; some would think that emigration into the neighborhood was checked by having the lands underrated and brought into discredit, while others would imagine that it was prevented by high prices. Above all, to the multitude of agents intrusted with this delicate task, there would be opened a field for speculation, so vast, so tempting, and so fraught with injury to the government and to individuals, that no supposed advantages to be anticipated from such a scheme could compensate for its dangers.

Another plan proposed is, to reduce periodically the price of the lands that have been culled. Thus, at the opening of a district, the land should be sold at one dollar and a quarter per acre; after a term of three or five years, the price should be reduced to one dollar; at the expiration of another term, another reduction would occur in the price, and so on. It is supposed that the choice lands would sell during the first term; that during the second they would again be culled, and the best of those remaining unsold would be taken at the reduced price; and that in each successive term a portion would be sold, until the whole should be disposed of, at prices somewhat proportionate to their value. The objection made to this plan is, that it would impede the sales of land, by holding out an inducement to persons proposing to purchase, to wait from term to term for the reduction of price. We do not think this objection well founded. Such delay on the part of purchasers would occur to a certain extent, but not to a degree to be compared with the advantages anticipated by this change. The farmer who had selected a choice tract of land, would not for three or five years run the daily risk of losing it, to save forty dollars. The probability is, that although in the first term the sales might be, to a very small amount, decreased, they would in the second and third terms be greatly swelled, and that on the whole, the lands would be sold more quickly, and to better advantage, than under the present system.

The plan of graduating the price of land, in the manner described, was introduced, in Congress, and has been most zealously advocated, by Col. Benton, of Missouri. It is recommended by its good sense, and practicability, and has been more favorably received by the population of the new states, than any other modification that has of revenue were not deemed applicable. It is not practicable to keep the public lands out of the market; and the present mode of disposing of them is not the most profitable, either to the general government or to the states, and must be expected, when the proceeds shall be no longer required for the public debt, to give rise to new and more serious objections.

"Under these circumstances, it is submitted to the wisdom of congress to decide upon the propriety of disposing of all the public lands, in the aggregate, to those states within whose territorial limits they lie, at a fair price, to be settled in such manner as might be satisfactory to all. The aggregate price of the whole may then be apportioned among the several states of the Union, according to such equitable ratio as may be consistent with the objects of the original cession, and the proportion of each may be paid or secured directly to the others by the respective states purchasing the land. All cause of difficulty with the general government on this subject would then be removed; and no doubt can be entertained, that by means of stock issued by the buying states, bearing a moderate interest, and which, in consequence of the reimbursement of the public debt, would acquire a great value, they would be able at once to pay the amount upon advantageous terms. It may not be unreasonable also to expect that the obligation to pay the annual interest upon the stock thus created, would diminish the motive for selling the lands at prices calculated to impair the general value of that kind of property.

"It is believed, moreover, that the interests of the several states would be better promoted by such a disposition of the public domain, than by sales in the mode hitherto adopted, and it would at once place at the disposal of all the states of the Union, upon fair terms, a fund for purposes of education and improvement, of inestimable benefit to the future prosperity of the nation.

"Should congress deem it proper to dispense with the public lands as a future source of revenue, the amount to be raised from imports, after the 3d of March 1833, according to the foregoing estimate, will be $15,000,000; but, with a reliance upon the public lands, as heretofore, it may be estimated at 12,000,000 dollars, to which, as the case may be, it will be necessary to adapt the provision for the future.

"Whatever room there may be for diversity of opinion with respect to the expediency of distributing among the several states any surplus revenue that may casually accrue, it is not doubted that any scheme for the encouraging a surplus for distribution, or for any purpose which should make it necessary, will be regularly discountenanced. There is too much reason to apprehend that a regular, uniform dependence of the state governments upon the revenue of the general government, or an uniform expectation from the same source, would create too great an incentive to high and unequal duties, and not merely disturb the harmony of the union, but ultimately undermine and subvert the purity and independence of the state sovereignties."

We shall briefly examine these suggestions.

The policy of the government in relation to the public lands has a twofold object: 1st, The reimbursement to the national treasury, of the funds expended in the purchase of those lands, and the payment of the national debt, for which they were pledged; and 2nd, an impartial distribution of the lands among the settlers of the region in which they lie.

It is now, we believe, a conceded point, that the equitable, as well as the legal and actual title to the public domain, is in the general government. The whole of it has been acquired with the means of the nation. Her treasure, her diplomacy, and her military force, have been used in the purchase, and in the protection of this noble property.

been suggested. The opposition to it in Congress, which has prevented its adoption has probably been excited, in part, by the prominent position which its able author has occupied as a party leader, and which has rendered this salutary measure an object of partizan warfare. It will, in all probability, be eventually engrafted upon the existing system, and will have the effect of concentrating the population, which has now a tendency to flow towards the extreme frontier, by offering advantages to purchasers in the older land districts, somewhat commensurate with those held out in the new.

In support of the opinion that the established price of the public lands is too high, some plausible reasons have been urged. Admitting the fact that the Federal Republic has the undisputed title to the soil, it does not follow, that she has the right to dispose of it upon her own terms, or to retard its settlement by the imposition of unreasonable restrictions. Holding it in her national character, it is held to the use of the people of the United States, and for the purpose of being settled, and erected into states. With regard to a large portion of this country, the erection of states was a condition express, and with respect to the remainder, the same condition is implied. Congress, therefore, is bound to throw the land into market upon reasonable terms; and while it is her duty not to entice population from other sections of the Union, it is equally her duty not to retard emigration to this. The national legislature should not be a mercenary vender of property *for gain*. The public land should be sold at its exact value—at the price which the people are willing and able to give for it.

That the present price of land is higher than the people can afford to give, has been suggested by a reference to facts, which seem to support this idea. Let us take for example the state of Illinois, which is situated in a temperate latitude, has a healthy climate, is surrounded with navigable streams, and has more arable land within its boundaries, than any other state in the union. It has no manufactories, little trade, few towns, and none of those of the larger class, and but few professional men. The people are agriculturalists, all of whom would, if they were able, own one or more tracts of land, and all of whom ought, in good policy, to be encouraged in their desire to possess the land they till. The whole quantity of land sold in this state, up to July 1828, was little over one million of acres, which divided into tracts of 160 acres, will give seven thousand such tracts—we throw off the fractions. The number of votes *actually given* at the election in August in the same year, was nearly seventeen thousand; and supposing that one man in every eighteen did not vote, we may set down the number of persons entitled to suffrage, at eighteen thousand. Those who know the habits and character of that people, will agree, that leaving out the villages and the professional men, nearly all the rest of the voting population are *farmers upon their own account*, and are, or wish to be, freeholders. Supposing then that the land sold, had been equally distributed, the number of tracts ought nearly to correspond with the number of voters. Yet the difference is as 7 to 18; and when it is added, that many farmers own more than one quarter section, that there are men in that state who own a great many tracts, and that a good many are held by non-residents, it will be seen that at the date above mentioned less than one third of the voters were freeholders. Yet there is no question of the fact, that the great majority of those who were not freeholders, being two thirds of this population, were farmers, residing upon, and cultivating, the land of the United States, ready and anxious to purchase, if they were able, and with the full intention of purchasing whenever they should become so. These men are not *squatters*, as they have been ignorantly termed. This opprobrious epithet was applied in its origin, to persons who settled upon the unimproved lands of individuals, in the older states, with the intention of acquiring titles by occupancy, or of profiting by the defects in the legal titles of the right owners. They took possession of the property of other men, with the avowed intention of holding it. The people who settle on the public land in the west, violate no right, and intend no injury. A man settles on a tract which he wishes to buy, enhances its value by his improvements, and should he eventually not become a purchaser, leaves it in a better state than he found it, for the reception of another occupant; and there is no instance on record, of any attempt on the part of such persons, to claim the fee simple, or defraud the government. There was a law passed, many years ago, to prevent the intrusion upon public land, and to punish the destruction of timber; but the government, finding that this kind of occupancy was beneficial to the public, never enforced the law.

Some light may be thrown upon this topic, by reference to a common traffic in the new states, known as the *sale of improvements*. By a tacit and long established understanding, persons who settle on the public land, acquire a sort of popular title to occupancy; no one interferes with the possession of another, nor can a purchaser, without incurring great odium, buy a tract, on which an individual may be settled. Such persons are usually of the migratory class, and often move away, leaving their improvements to the next comer; but they more frequently sell them, either to those who like themselves have no title to the land, or to such as propose to purchase the soil. They sell simply the house and fences which they have put up, and the popular right to occupy the particular tract of public land, which they happen to have settled upon. The fact that such improvements command a price, and the universality of this practice, shew that the land is not injured, but benefitted, by the occupancy of such settlers.

If the fact be, that there are communities in which two thirds, being farmers, desire to become freeholders, but are unable to purchase land at the price demanded by the proprietary, ought not the proprietor, being the government, to reduce its price? We have thought that it ought; but several years have passed since the above data was collected, and the opinion just indicated, formed—the circumstances of the country have changed—and we should now give such a decision with some hesitation.

But other facts are worthy of attention. Fertile as the soil of the west is in general, there are extensive tracts which at present are unsaleable, or of no value. These are, immense prairies, destitute of timber and water—river bottoms, subject to inundation—and sterile tracts. In the state to which we have just alluded, and some others, there are vast regions in which the open prairie is the predominating surface. The soil is generally fine; the water is found at a short distance below the surface; but timber is indispensable for fencing, for fuel, and for building, and without it these lands cannot be settled. But these prairies, as we have shown under another head, are annually decreasing in extent. This result is only produced, however, in the neighborhood of thick settlements. Would it not be wise to accelerate such a process by artificial means, and to offer inducements which might tempt settlers to venture into the open prairies, and to propagate timber by planting? The inundated bottoms are only valuable for their timber, which is often fine, but the lands are rarely purchased on account of that single advantage, as they are generally distant from the arable prairie lands. The soil is frequently excellent, and sometimes very choice, but it will not sell until the country shall become densely settled, and a sufficient surplus wealth shall exist, to enable the inhabitant to embank and reclaim it. These bottoms are not only valueless in themselves, but by their unhealthiness contribute to reduce the value of the adjacent lands. The climate of this region, the soil, the water, and the conformation of the country are salubrious; the causes which produced febrile and bilious diseases formerly, are mostly removed in all the dense settlements; the river bottoms alone, and the surrounding country, remaining a melancholy exception to the general and rapid improvement in this particular. If the government would give away such tracts, to any who would reclaim them, it would gain in the enhanced value of the adjacent lands, and the inhabitants would be incalculably benefitted in the removal of serious nuisances. As to the other class of unsaleable lands, the sterile—it is to be remarked, that a large portion of it is poor only in comparison with the fine lands of this region. Things which are offered for sale, are valued by comparison with other things of the same kind, and by the eagerness of one party to buy, and of the other to sell. Thus valued, this land is worth nothing. No man will have it, at the price demanded, when he may have better land at the same money. By comparison with other property of the same kind, it sinks into utter nothingness; it cannot acquire an adventitious value from the eagerness to buy of a purchaser who has a boundless region before him, and it will only be brought into market by the anxiety of the owner, evinced in a reduction of price so liberal as to tempt the cupidity of the buyer.

Another view of this question is not unworthy of consideration. Referring again to the state of Illinois, it will be seen that this state contains a little over thirty five million acres of land, and that in 1829 thirty millions remained unsold in the hands of the United States; the balance of five millions including the whole amount of sales and grants, whether to the state or to individuals. The sales since that time would vary these proportions, a little: but the principles are the same. The people of Illinois own one seventh of the whole quantity, the United States the other six sevenths; yet the people of that state alone defray the expenses of their own government, while its benefits are enjoyed by the general government, to an extent, in some degree proportionate to the size of their domain. Every new county that is established, every court house that is built, every road that is opened, every bridge that is erected, enhances the value of real estate; and of the land thus enhanced in value, the United States owns six acres, where one is owned by the state, or by the individuals who pay for the making of such improvements. That the general government is daily receiving substantial benefits, resulting from the expenditure of the money and labor of the western people, is evident; and it is worthy of inquiry, whether it be not bound, in justice, to discharge a debt thus created, and what should be the extent and character of the remuneration. It is said that congress has been harassed by appeals to its generosity, on the part of the western people. Is it not probable that those appeals have rather been made to the *justice* of that body, and that there has been in fact, an interchange of benefits, which has been mutually beneficial? The inquiry lies within a narrow compass. In all the Western States, (Kentucky excepted) the general government owns land; to none of those states does it pay taxes. It has its ample share of all the advantages resulting from the local governments: the civil protection afforded by the latter, and the public improvements made by them, invite population, and by converting a wilderness into a civilized country, render those lands saleable, which otherwise would remain unproductive. Does not this state of things impose an obligation on the Union, to aid in carrying on that process, by which, as the largest proprietary, it is the greatest gainer? If the western people ask the discharge of that obligation by a reduction in the price of lands—by donations for schools, or for internal improvements—or in any other way, the claim is entitled to a respectful consideration.

We do not infer from this reasoning that Congress is bound to comply with a demand, even of a majority of the western people, to reduce the price of land. She acts as the trustee of all concerned. The state in which the lands lie is one party, and all the other states, another; the government, and the purchaser, have each an interest. Yet these are not conflicting, but harmonizing interests; and that policy which should advance them all, without leaning to either, would alone be wise. It is not expected that the government should drain the population from the old states, by offering inducements to emigration to the new; nor would she have the right to retard the settlement of the new states by withholding the land from sale, or demanding for it an extravagant price. There are various reasons why the price of public land should be reduced to the lowest practical point. It is good policy to increase the class of freeholders, to arrest the footsteps of the migratory poor, and settle them down upon the soil; to elevate the character of the citizen, by holding out to him the rewards of industry; to convert hunters and labourers into farmers; and to attach men firmly to the government under which they live, by making them holders of property. But these desirable results would be retarded, not advanced, by reducing the price of land too low, and by putting it at such a price as might induce capitalists to invest large sums in this species of property, thereby converting extensive tracts into private estates, to be withheld from sale, and from being inhabited, and to remain in unproductive wilderness, for long and indefinite periods. Again, these sales are to be conducted with impartiality; the interests of one state are not to be promoted in preference to those of another, nor is any state to derive exclusive advantages from the governmental action over its property.

It should be recollected also, that the government, being the largest holder of land, in this wide region holds in her hands the power of regulating to some extent the price of real estate. Her interest amounts, in the newest states, to nearly nine tenths of the whole—in the elder of the western states, it is still great—in the aggregate it is vastly greater than that of individuals. A large and industrious population of farmers have become owners of land here, by purchase from the government. They have been the pioneers, and have endured hardships which do not now beset the path of the settler. Those who came first gave two dollars, others have given one dollar and a quarter, for their land; and if they, in the face of the difficulties which then surrounded the emigrant, when there was no market, and no money, could afford to give these prices for land, their successors can still better afford them now, when money is abundant, trade active, and the country improved. And the questions may be fairly put, whether Congress could *justly* depreciate the value of the lands which she has sold, by now reducing the price of the adjacent land—and whether she is not bound to protect the interests of those to whom she has sold, as much as to conciliate the favor of new customers? It will be seen also, that however plausible the argument in favor of the reduction of price might have been a few years ago, the considerations which are to be thrown into the opposite scale have been, and are still, daily and hourly increasing: the danger from Indian hostilities has been removed—the hardships of settlers have been decreased—the whole country has been made accessible by roads and steam navigation—improvements have spread widely—manufactories have been established and markets opened—land is actually worth more than at any former period—and the immense increase of freeholders has created a numerous and rapidly growing class of citizens whose interests are directly opposed to any measure which would depreciate the value of real estate.

Petitions have often and earnestly been pressed upon Congress, to grant the right of pre-emption to actual settlers, and such laws, limited usually in their duration, and sometimes confined to particular classes of claimants, or sections of country, have been passed. As a general rule they have been uncalled for by any principle of justice, and liable to great abuse. In a few instances, where persons have settled in a district of country before the land was brought into market, it was proper, on the opening of the land office, to give them the pre-emption right; but in a large majority of cases, such laws have been unjust towards the *bona fide* holders of land, and injurious to the government, while they have been productive of a vast deal of dishonest speculation. The class who are ostensibly to be benefitted have seldom any claim to the indulgence extended to them, and as seldom avail themselves of its privileges. The idea of protecting the actual settler carries an air of popularity about it, which renders it wonderfully efficient in the hands of the men who *love the people*, and who propose measures of this kind merely for effect. For one farmer who avails himself of a pre-emption right to secure for his own use, the land which he occupies, there are ten occupants who never intended to purchase, and who sell to a speculator that which was improperly given to them.

On the whole, it seems doubtful whether any improvement can be made in the present plan of selling the public lands. The system is simple, and equitable; and vast as the concerns of this department are, they are now managed with admirable fidelity and correctness. So long as the United States shall continue to occupy the existing proprietary relation towards the western country, there will probably be but little change in this part of her policy.

But it has been suggested that the government ought to divest herself of the character which she now sustains in relation to the public domain. In a report from the treasury department made at the opening of the first session of the twenty second congress, we find the following remarks:

"The sources from which the revenue has hitherto been derived, are the imports, public lands, and bank dividends. With the sale of the bank stock, the latter will cease, and, as the imports, according to any scale of duties which it will be expedient, and practicable to adopt, will be amply sufficient to meet all the expenditure, that portion of the revenue heretofore drawn from the sale of the public lands may be dispensed with, should congress see fit to do so.

"On this point, the undersigned deems it proper to observe that the creation of numerous states throughout the western country, now forming a most important part of the Union; and the relative powers claimed and exercised by congress and the respective states over the public lands, have been gradually accumulating causes of inquietude and difficulty, if not of complaint. It may well deserve consideration, therefore, whether at a period demanding the amicable and permanent adjustment of the various subjects which now agitate the public mind, these may not be advantageously disposed of, in common with the others, and upon principles just and satisfactory to all parts of the Union.

"It must be admitted that the public lands were ceded by the states, or subsequently acquired by the United States, for the common benefit; and that each state has an interest in their proceeds, of which it cannot be justly deprived. Over this part of the public property, the powers of the general government have been uniformly supposed to have a peculiarly extensive scope, and have been construed to authorize their application to purposes of education and improvement to which other branches

Any attempt to divest the Federal Union of her interest in it, until the debt created by its acquisition be wholly discharged, would be clearly inequitable; and this too, we assume to be a point conceded, or too obvious to admit of cavil. But is this all; and are we certain that the precise nature and amount of the expenditure alluded to are understood? The mere purchase money is one thing; but has any calculation been made, for the purpose of ascertaining what proportion this bears to the multifarious contingencies which have arisen out of the acquisition? The pay of the functionaries engaged in negotiations, and of the additional troops required by this extension of territory; the cost of surveying and sale; the annual expense of legislation, and of the general land office; the interest upon these expenditures; and a variety of other items, which, under the pen of a close calculator, would swell to an astonishing amount, would all be legitimate charges upon these lands. Nor can there be any doubt, that the liberal donations for public purposes, *within the territory in which they lie*—for roads, canals, schools, &c., would also be fairly chargeable to this fund, in all cases except where equivalents have been paid by the individual states for such grants. It should also be recollected, in estimating the amount of the purchase money, that at every treaty held with the Indians, for the extinguishment of their titles to their hunting grounds, there has been given to them, besides the specified price of the land, an amount greater or less, in presents; and that in many cases, the purchase money has been stipulated to be paid in annuities, some of which are to be perpetual. Supposing then that all the actual disbursements, heretofore made from the public purse on this account, be accurately ascertained, by what rule of arithmetic shall we arrive at any correct estimate of the amount which will be required, to pay annuities for twenty years, for thirty years, for so long as a given tribe shall remain a distinct nation, and during the lives of numerous individuals who are pensioners upon this fund?

But again. Is it a settled point that the interest of the nation in this property, *ought to be* extinguished, as soon as she is reimbursed? We apprehend not. Admit that an account which the United States may have opened against these lands, and in which she has charged them with every expenditure made in reference to them, direct or consequential, has been balanced by the receipts from the land offices, can a good reason be offered, why they should not be continued to be held by the government as a source of revenue? No one would contend that an individual, having derived from an estate a profit equal to its cost, would be bound by any rule of propriety, to convey it back to his grantor, or throw it into the common stock. With as little justice can the United States be called upon by the individual states, or either of them, to make a similar surrender. The very idea of *property*, excludes such a conclusion; for it not only includes present possession and use, but all ulterior and accidental advantages which may, by any possibility, accrue to the owner. If the United States has a clear and perfect title to this land, it is a gratuitous assumption for any other party than herself, to prescribe a limit to the tenure which is in its own nature indefinite.

We learn from the treasury report, that there are now but three sources of revenue to be relied upon for the support of our government, viz: imports, public lands, and bank dividends. It is proposed to sell the bank stock and apply the proceeds to the payment of the public debt, to dispose of the lands to the several states in which they lie, and to rely solely on the duties upon imports. As to the prudence of depending upon a single source of revenue which may be deteriorated by unforeseen causes, we shall not venture an opinion; but we apprehend that this policy cannot be adopted without begging a question, or in other words assuming the correctness of doctrines which are hostile to the opinions of a large portion of the nation At a time when a tariff is odious to the whole population of some states, and to entire classes of citizens in others, would it be safe, would it be consistent with that principle of reciprocity, that spirit of compromise, that patriotism, to say all in one word, which ought to regulate the economy of a great nation, to abandon all other sources of revenue, and depend upon the single one which has excited more dissention than all the others put together? If it be replied that no objection is made to a tariff which is resorted to as a financial resource, and that the propriety (or right) of laying duties on imports, is only questioned when they are attempted to be used to support manufactures, or to encourage sectional industry, we ask, is there no danger, that when duties on imports should become the sole dependence of the treasury, they would have to remain as high as they now are; that the identical duties now objected to would be retained; and the cause of complaint remain the same, under a change of name? There may have been conclusive reasons in favor of the creation of the existing system of duties, but would those reasons reach forward, and justify its adoption as a *permanent* feature in the policy of the government? And shall we put it out of our power to reduce or discard those duties, when the necessity which induced their adoption shall have ceased?

Another consideration strikes us as worthy of notice. Revenue should be raised in such a manner as to bear equally upon all classes of society; none should be exempted from the burthen, nor any oppressed by its weight. The perfection of a system of finances, would be found in the exact operation of this principle, reaching to every individual in society, and extending to each his equitable portion of the public burthen; but as perfection cannot be expected to be attained in transactions so gigantic and complicated, the nearest approach to it, becomes the most rational substitute; and this will be found in adopting the principle to which we have alluded as far as practicable. Now it seems very clear, that by multiplying the sources of revenue, we should increase the chances of making it bear upon all classes of society, and on the other hand, by diminishing their number, we shall multiply chances that some would be oppressed. Especially does it appear to us, at least *probable*, that if a *single* source of revenue be depended upon, the burthen will be unequally borne, and that some classes will occasionally, and some perhaps always, be exorbitantly taxed, in comparison with others. These considerations are not conclusive, but are thrown out as rational doubts. If it can be shewn that duties on imports can be extended to so great a variety of articles, that all our citizens, shall by these means, be equally taxed, and the industry of none be vexatiously burthened, or if these desirable results can be produced to a reasonable extent, then our objection will have been answered.

We may mention in this connexion, a proposition to divide the annual nett proceeds of the public lands, among the several states, in the ratio of their representation, to be expended for the purposes of internal improvement and education. If it be determined that these proceeds are not to be appropriated to the ordinary purposes of revenue, but must have a specific application, it is still not clear, that such a distribution would be judicious or even just. If the distinction between federal interests and state interests is to be persisted in, and the line between state and federal rights broadly and strongly marked, the question arises, upon what ground this can be claimed as a *state* fund? It has not been created by the action of the state governments, nor earned by the prowess, the talents, or the labor of citizens of states, acting as such. The claims of individual states, as far as any existed, have all been ceded to the Union; and the subsequent purchase, with all its incidental expenses, was made with the national treasure. That Congress has a clear right to divide the surplus revenue of the Union among the states, is not denied; but the propriety of thus parceling *this* fund, in preference to any other does not seem obvious. We should place it exactly on the same footing with the revenue from any other sources. Should there then be a surplus of the aggregate annual receipts, and its distribution be urged as a concession to the opinions of those who deny the right of the general government to expend money for objects of national improvement, we should not demur, because we would yield much—almost any thing—to a liberal spirit of compromise. But we should yield it only as a concession. We doubt the justice of dividing a fund disposable for general purposes, according to population. A national fund should be expended where it is most wanted, and where it would be most extensively useful. The most populous state might not require the largest expenditure; and the least populous might stand in the greatest need of assistance. A sum expended in one state in making a road, is not necessarily chargeable to that state as if for its exclusive benefit, because the advantage may be equally great to adjacent states. An immense sum of money was laid out in the states of Maryland, Virginia, and Pennsylvania, in making a road from Cumberland to Wheeling, which is less beneficial to the two last named states, than to those lying west of them. The correct principle seems to be, not that the expenditures should be made within certain limits, but that the benefits should be fairly distributed. This would be best effected by the concentrated action of one government. Still, on this point we should not be strenuous. We should deprecate the division into twenty-four parts, of a sum, which at all events will be small, in comparison to the objects to be effected, and which by this process would become comparatively inefficient. But it is better to forego such advantages, than to gain them by violence to the feelings of a respectable minority.

Another very important consideration is involved in this question. One of the greatest advantages secured to the people of the United States by the proprietary action of the government over these lands, has been the equitable mode of their alienation to individuals. This is a matter which comes home to men's business and bosoms. There is no power exercised by the government, which is regarded with such jealousy, or should be exerted with so much circumspection, as that which reaches to the fireside of the citizen—that which affects his *home*, and the maintenance of his family. Every thing else may be endured, if there be security, comfort, and abundance in our dwellings. Whatever other privilege we may resign, we will not suffer that of pursuing happiness, to be ever jeoparded.

The right to emigrate, is not only a natural, but a chartered right. Our citizens are secured in the privilege of removing from one state to another, as well as in the exercise of all rights in the state of their adoption, which they enjoyed in that of their recent citizenship. It is our policy to be one people ; to throw wide open all the avenues of internal intercourse and trade ; to leave private enterprise unshackled, and industry free to exert its energies, wherever they may be most usefully employed. We are an active and a migratory people, accustomed to independence, impatient of restraint, and unwilling to endure any discomforts, which may be removed by exertion, or escaped by a change of residence. We have no entailed rights to bind us to the spot of our nativity, and but slender hereditary attachments ; and we not only highly value, but will maintain at every hazard, the privilege of seeking subsistence and happiness, wherever we please to think they may be found. We do not recognise the moral right existing in any body of men, to monopolise the soil which was given to us and our children by a bountiful Providence, to stay the footsteps of industry and the arts, or to shackle the advancement of letters, civilization, and Christianity. If we can ever justify our banishment of the Indian from his hunting grounds, it must be upon this principle; he was a monopolist, occupying more than he could use consistently with the good of mankind; he was a barbarian, hostile to the social, the useful, and the elegant arts of civil life. It is a legitimate exercise of governmental care, to respect such feelings, and cherish such rights; and if by design or accident, the government has possessed itself of the means of gratifying a national propensity, and of dispensing the blessings of a great national source of prosperity, it should pause, and reflect maturely, before it resigns a power so benign, and so extensive.

The settlement of the western lands, is a matter of national concernment; one in which all the states are interested in a greater or less degree. To one they afford homes for her industrious poor, or enterprising youth, to another an outlet for her manufactures, to a third a market for her commercial imports; while all are obliged to view them as the future birth place of the millions of freemen, who will soon constitute the majority of the nation. We cannot shut our eyes to the truth, that in the proportion in which industry, moral habits, intellectual cultivation, and sound national principles, shall be planted and cherished in this region, will be the predominance of those virtues in the future guidance of our national councils. The history of other nations affords no parallel to that anomalous and magnificent process which is now going forward in our country. The nation is silently but rapidly building up its own future seat of empire. The howling wilderness, which our immediate ancestors viewed with carelessness, and partially explored, with extreme difficulty and danger, is fast becoming the centre of power, the seat of wealth, the theatre upon which the nation in its matured vigor will exhibit its concentrated energies. *The nation*, as such, has a stake in the growth of this country, which she cannot value lightly.

In her proprietary character, the government has been enabled to establish the boundaries of newly organised territories, so as to give to each future state its just limits. The country has been surveyed, divided, and prepared for sale, under a wise and uniform system. The sales have been conducted with order, impartiality, and publicity. The dweller in Maine or in Georgia, may by reference to public documents, know the contents and price of each tract of land in the west, and the time and place of sale, with as much certainty as an inhabitant of the vicinity. The price of land is invariable. These are advantages which should have great weight in the public mind. If the citizens of the Atlantic states appreciate the privilege of emigration to the westward, and the advantage of a fair competition in the market of new lands; and if the people of the western states place a just value upon the security of their titles to real estate, upon the harmony which now prevails in its distribution, and upon the regular flow of that full and fertilizing tide of population, which is now pouring in upon them—they would pause, each of them would pause, before they would submit to the hazardous experiment of a change of policy, which might give us confusion in the place of order, and entail upon us the reverse of all that we value, instead of what we enjoy.

But we are told that the relative powers claimed and exercised by congress, and the respective states, over the public lands, have been gradually accumulating causes of inquietude and difficulty, if not of complaint. This is in part true; but before we assent to the necessity of applying any of the proposed remedies, let us examine the extent of the grievances complained of, and inquire whether they be real or supposititious. Have the people of the western country any just ground of complaint? Are they really dissatisfied? Fifty years ago, the United States had not a single settlement west of the Ohio river, if we except a handful of inhabitants at the French villages; and in 1793 the army of General Wayne marched through Ohio, then a wilderness. So lately as 1812, the inhabitants of Illinois and Indiana were so few in number, that they protected themselves with difficulty against the Indians. Tecumseh with a little band, of a few hundred warriors, kept the whole frontier in terror. At this time the state of Ohio alone contains over 1,000,000 of inhabitants; and the aggregate population of Ohio, Indiana, Illinois, and Missouri, is more than two millions. If to these we add the states of Alabama, Louisiana, and Mississippi, in which the lands are similarly situated, and which have been chiefly settled within the same period, we have a population of three millions, without including the territories of Michigan and Arkansas, which contain a hundred thousand more. In fifty years a region, containing more than half a million of square miles, has been reclaimed from the dominion of the savage; seven states have grown up and been admitted into the Union, and two others are ripe for admission; a population of three millions has been accumulated, consisting chiefly of the agricultural class, a large portion of whom possess freeholds, and all of whom are blessed with a greater degree of plenty, and burthened with fewer cares, than any other similar number of civilized people. Fifty years ago, the canoe and the pirogue were the only boats on all the noble rivers of the west, with the exception of a few barges; since then, seven hundred steam boats have been built in this region, with its native timber and materials, and employed upon its waters. In 1826 the amount of capital invested in steam boats, by the citizens of Cincinnati alone, was upwards of 500,000 dollars, the imports of that city were more than 2,000,000 of dollars, and the exports 1,000,000. In the same region there are more than a dozen reputable colleges, together with respectable medical, theological, and law schools. Books are published to a considerable extent. In Cincinnati alone, very many volumes a day, issue from the press. These, with a thousand other facts which might be added, are surely not the indications of an oppressed people, or of a country crippled in its resources, or checked in its advance to greatness.

The public improvements that have been scattered over this valley, by the munificence of the government, however scanty they may seem to a sanguine and enterprising people, ardent in their views, ambitious in their public spirit, and impatient of delay in their rapid march to power, have been worthy of a great nation. The Cumberland road alone, is a monument of national beneficence. Designed to stretch through an extent of eight hundred miles; meandering for sixty miles among the cliffs and precipices of almost inaccessible mountains; intersecting the noblest rivers of the west, and crossing her fertile and extensive plains; studded in its whole length with elegant and durable bridges—such a work speaks more in favor of the advantages of the connection between the western people and the government, than volumes of abstract reasoning. And this is but a part of what has been done. The shores of the northern lakes have been surveyed, and their facilities for commerce ascertained; immense sums have been laid out in improving the harbors of the lakes and the navigation of the large rivers; extensive grants of land have been made to aid in the construction of roads and canals; in short, millions of money have been in various ways appropriated to advance the best interests of this region. That these appropriations have fallen far short of our just proportion of the public treasure, and have been inadequate when compared with the sums expended on the sea coast, must be admitted; but they have greatly exceeded any expenditure which could have been reasonably expected, under the action of the several states, had they possessed the land.

Of what then do the western people complain? Are they taxed by the government? No. Are any precluded from voting, or ineligible to office? None. Do any starve, are any houseless, or naked, or in prison for debt? These are unknown evils. Are standing armies quartered among the people, or do the myrmidons of government eat out their substance? Nothing of all this. Do seed time and harvest fail? Does not the labor of the husbandman yield an abundant reward? Are his hard earnings riven from him by fraud or violence? Do the oppressors grind the poor? Are not life and property secure? Is there any to molest or make afraid, the man who sits under his own vine? We need not pause for a reply: the face of nature, the condition of society, and the happy estate of man in this favored region, teeming with abundance, peace, and cheerfulness, all testify against the existence of any widespread individual distress, or civil misrule.

But complaints have been made; they are matters of record, and their nature being distinctly known, they may be easily examined. In the first place, it may be remarked, that the western people have sometimes been misunderstood, and have been considered in the light of dissatisfied remonstrants, when they only asked the correction of error, or the redress of an accidental grievance. Such were the petitions of several of the states, for exchanges of the lands given for the support of schools, when portions of them proved to be worthless. In most instances, we believe in all, valuable considerations were given by the states for those lands, and of course when large parcels of them were ascertained to be deficient in the value which they purported to bear at the time of the transfer, there was precisely that kind of failure of consideration, which would support an equitable, if not a legal claim upon the grantor. There have also been hundreds, perhaps thousands, of instances of individual grievance, which demanded legislative interference; wrongs for which existing laws provided no remedy, cases where titles to land have become forfeited by the mistakes of officers, or could not be completed in consequence of statutory defects, or inconsistencies. Laws intended to afford general relief, and framed with due care, have sometimes been so worded, as to omit whole classes of sufferers, who were thus thrown again upon congress, in the character of petitioners. Nor can it be denied, that individuals have sometimes mistaken their remedy; that even meritorious individuals have sought that remuneration from the generosity of congress, which was denied them by stern justice; that imaginary claims have often vexed the ear of government; that the dreams of self-love, and the speculations of the visionary and the avaricious, have often been intruded upon the public. When we consider the vastness of the public domain, the number of citizens interested as purchasers, as land holders, or as persons desirous to purchase, it will be seen that the petitions to congress, must unavoidably be numerous, and that their number affords no indication of public dissatisfaction, or of an importunate spirit. The captious may indeed complain of importunity, and the indolent or undiscerning, whose want of information disables them from drawing the proper distinction, between claims of right and petitions for bounty, may turn a deaf ear; but such are not the conclusions of enlightened statesmen, or liberal men. Nor are these the *complaints* of the country; they are not grievances tending to disunion, or which ought for a moment to disturb the equanimity of either of the great parties to the question before us. They are claims of right, to be decided upon evidence; or they are supposititious demands, the rejection of which can excite no public irritation. The whole of the cases to which we now allude, are, in short, analogous to suits at law, and we are not prepared to admit that the decision of the former, would ever cause public dissatisfaction, any more than the adjudication of the latter. The reader of the congressional proceedings, and even the member of congress, who does not reflect sufficiently upon the peculiar connection between the western states and the general government may be startled at the *number* of the petitions presented to that body by western members, and draw unfavourable inferences from that fact; but the suggestions which we have thrown out will show the injustice of such deductions.

Such being the extensive, the complicated, and the important interests, involved in this branch of the subject, and the parties to be affected being so numerous, differences of opinion may well arise. But these are generally collisions of interest, and not controversies as to principles. The fundamental rules, which ought to govern these sales, are well settled, and thoroughly understood; but different classes of men, and the inhabitants of different sections of the country, entertain conflicting opinions as to their respective interests, and naturally seek advantages for themselves. Therefore we find a variety of modes of disposing of the public land, originating from various quarters, and advocated with untiring zeal, and admirable ingenuity.

Some of these plans have merits, some are merely specious, while many are not even seriously advocated by their projectors, but are mere hobbies, on which demagogues ride into office, and which are abandoned when the temporary purpose for which they were brought into existence, has been accomplished. The men who *love the people*, have been ingenious in every age of the world, in giving a momentary importance to their own whims, or artful designs, by making them assume the appearance of public sentiment.

But should congress reject all these propositions, will the western states have cause to complain? Have they any reason to consider themselves oppressed, by the adherence of government, to a system under which they have enjoyed such unexampled prosperity? Will the minority be so deficient in patriotism as not to submit cheerfully to the decision of the majority? Will the generous west, heretofore so loyal, so patriotic in the hour of danger, so proud of her rising greatness, tarnish her young fame by disobedience, or by being guilty of the weakness of indulging resentful feelings? Far from it. The people are not oppressed, and cannot be persuaded to fancy themselves the objects of oppression.

We have already shown that the western country at large is in a prosperous condition; and when we read some of those injudicious speeches in congress, in which a contrary idea is held out, we are forcibly reminded of a beautiful oriental fable. A prime minister who had grown grey in office, was sentenced to death, on suspicion of mal-administration, but in consideration of his long service, his punishment was commuted, at his own request, to banishment to a deserted village. But on search, a depopulated village was not to be found in the whole empire. "Can that nation be badly governed," he exclaimed, "in which every village is prosperous?" He was reinstated.

A few facts will set this matter in its true light. Land is now sold in tracts of forty acres, at $1.25 per acre. For fifty dollars, an unimproved tract of forty acres may be purchased. In any of the states west of the Ohio river, a laborer can earn 75 cents a day, and if his living be supposed to cost 25 cents, which in this plentiful country is a large estimate, he can, by the labor of *one* *hundred days*, or about *four* months, purchase a farm. But as the working days in a year, excluding bad weather, might not amount to more than 200, it may be safely asserted that a laborer can purchase a tract of 40 acres, by six months steady work, and that by the labor of a year he may purchase 80 acres. Again, a laborer can get his board, and *ten dollars* per month, the year round, which would amount to $120, and if $20 be deducted for clothing, he will thus be enabled to purchase a farm, in six months, or a larger one in a year. All kinds of stock can be raised in this country with facility, and at little cost. A good work horse is worth fifty dollars—a cow from five to ten dollars, a fat steer from ten to twenty, and hogs from two to five dollars per hundred pounds. A man then can purchase forty acres of land by the sale of a horse, or from four to six head of cattle, or ten hogs; and as individuals are not prevented from settling on the public lands, but rather encouraged, the means are thus afforded to farmers to acquire this property previous to the purchase of the soil. Mechanic's wages are much higher; those who work in the most useful arts, such as carpenters, blacksmiths, shoemakers, &c. find ready employment. An individual of this class may earn money enough to buy eighty acres, in six months—some of them can earn their acre per day. A person who teaches a common English school, receives from $2 50 to $3, per quarter for each pupil, and such persons are in great demand. A school of thirty scholars will yield ninety dollars per quarter, or $360 per year. Let it be further taken into consideration, that the extensive public works now in progress under the general and state governments, furnish employment, and high wages, to laborers and mechanics, and supply a circulating medium, and it will be seen that any industrious man may buy a farm.

If then the people are not suffering material injury, but are really prosperous, would it be wise to change the existing system, merely because it may jar with some political hypothesis of state rights, or jostle some abstract theory, relative to the balance of power in our thriving family of republics? Will the people suffer themselves to be deprived of the solid advantages in their possession, by the promise of benefits of doubtful value? Are the speculations of politicians to be for a moment weighed in the balance against the rapid advance of the country, the peace, the security, the thousand blessings, which are not visions of the brain, but substantial present enjoyments? Above all shall we be drawn into these delusions by imaginary distinctions, which are attempted to be drawn, between the state and federal governments, both of which are equally *ours*, and have in fact no separate interests?

There is no cause for dissatisfaction. The next question which we proposed to examine, is in relation to the *existence* of that feeling. Is there, in fact, any discontent prevailing in the new states, towards the general government, in regard to the public domain? Ours is a country in which the murmurs of discontent are not suppressed, nor the hearty shout of approbation restrained. The oppressed find every where bold and able champions; the expression of public opinion is free, and the organs for disseminating opinions numerous. In the west especially, where the practice of stump-speaking prevails, and where candidates for popular suffrage are required to address the people, upon the various topics which agitate the public mind, the tone of public sentiment cannot be mistaken. Do we hear of tumultuous meetings, of inflammatory addresses, of threats to nullify the acts of the government, in these loyal states? On the contrary, although a high degree of excitability pervades the Union, and the slightest spark produces an explosion of indignant feeling, the western states are quiet. The tenants of the ant-hill, or the bee-hive, are not more industrious nor inoffensive. The only excitement is that of enterprise, the only hum that of business. Tariff, masonry, nullification, abolition, and Roman Catholics, vex them not. While the north and the south fright the land from its propriety, by the earnestness of their contentions, the west is in repose. As our nation laid the foundations of its greatness, while the rest of the world was at war, so the new states are quietly gaining population, wealth, and power, while the old are wasting their energies in idle contention. It is true, that politicians, in the dearth of subjects for popular discussion, declaim in good set terms about the public lands, assert roundly that the country is embarrassed, and declare its liberties in danger from the action of the general government. But where is the free country, or what the time, in which such harangues have not been made? They are "the cankers of a calm world and a long peace," the outbreakings of a restless ambition, which finding no excitement around it, endeavors to create the element in which alone it can live. But we assert, from an intimate knowledge of the western people, that a traveler may pass through the length and breadth of the new states, without hearing the public lands mentioned, *by the people*, in the tone of complaint. In particular districts, temporary excitements are gotten up, for special purposes, which subside when those purposes are accomplished. But the people at large are well satisfied with the present arrangement. In no portion of the Union is there more of a *national*, and less of a *sectional* feeling, than in the west. The western people have grown up under the patronage of the government, they have fought under its banners, they feel identified with its fame, and their affections are entwined around it. They feel, too, the pride of conscious strength. In promoting the prosperity of the whole nation, they are building up that great community, whose destinies will one day be swayed by themselves. They cannot be jealous of the power of the government, any more than a son is jealous of the paternal authority, which will soon descend to himself.

We shall close this article, already longer than we intended, by adverting to the proposition to dispose of the public domain, to the several states, in which it lies. We should deprecate such a measure. Most of the arguments to be urged against it have been anticipated. If the present system teems with the advantages which we have enumerated, it would be inexpedient to relinquish them, for a measure of doubtful policy. If the "gradually accumulating causes of inquietude and difficulty," assigned as the chief reasons in favor of a change, are shown to be overrated or imaginary, those reasons cease to have weight. Let us examine the proposition a little more closely. One of the greatest advantages in the present system, is the *uniformity* which prevails in the price of land, and mode of sale. The lands of the government, although lying in different states, are all offered at the same price, the land offices are all organized alike, the manner of sale every where the same, and the regulations published by government are of general operation, and easily accessible. Should these lands become the property of the several states in which they lie, all this might be changed. One state might sell for cash, and another upon credit; one might determine to sell only to the actual settler, another might adopt a different arrangement; one might hold her lands at a high price, and another rate them low; or they might all engage in a ruinous competition, by endeavoring to undersell each other. That different systems would be adopted in the different states, we have ample reason to believe; and it is equally probable that those systems would be often changed. Publicity would be given to these several, and ever varying systems, through various different channels, and the emigrant would have to search the statute books and newspapers of a number of states, in order to ascertain the relative advantages offered to the purchaser. Should the states enter into a competition to entice population, there is no knowing where the confusion would end, or to what extent the fierceness of contention, or the sordidness of speculation, might be carried; and these sister states, now so united in feeling, so happy in their prosperity, so closely allied by juxta-position and interest, might become the theatre of jealousies growing from year to year, and ending in settled animosity.

Several of these states have had fearful experience of the evil of creating the relation of debtor and creditor between the government and its citizens. In Kentucky, the lands south of Green river, were sold by the state, to her citizens, upon credit. Instead of proving a blessing, they have been a curse; instead of enriching her treasury, they have impoverished it. Every year brought the purchasers of land before the legislature, as petitioners, for extension of the time of payment; and although thirty years have elapsed since the sales commenced, the same process is annually continued. The expenses of legislation eat up all the proceeds. Nor is this all. The "Green river claim," has become a standing theme, as everlasting as the famous case of Amy Darden's horse. A number of counties are now interested in it, in which members to the legislature can only be elected, under a pledge to become its advocates, and a party is thus formed, of which the members, however highminded, are obliged by circumstances, to unite in supporting a measure of local popularity, even at the sacrifice of high general interests. In Tennessee, a valuable reservation of lands, set apart to promote education, was sold in a similar manner, and the proceeds released, here a little and there a little, until nearly the whole has been squandered; while the moral effect upon the ordinary legislation of the state, has been as pernicious as in the former case. In several of the states, banks have been created, and money loaned by the state to the people. In every instance, the effect has been the same; a relief party has been organized, and prepared to appease the clamors of the people at every hazard. These instances all illustrate a simple proposition. Where the representative can confer on his constituent a pecuniary advantage, out of the public funds, there is a direct tendency to corruption. If the candidate for a seat in the legislature, can promise to sell lands to the voters at fifty cents an acre, for which the existing price is one dollar; or where a majority are debtors, will promise to postpone the day of payment; there will always be found men ready to become parties to such contracts. Such propositions, though at first made with caution, become sanctioned in the eyes of the people by frequent repetition, the doctrine grows popular, and candidates, always quicksighted in discovering the road to office, espouse it with zeal. Under the present system, we are free from such abuses. Of the twenty-four states which compose the Union, but seven are occupied by portions of the public domain, and if we suppose it possible for the representatives from those states to unite, in advocating measures of the character alluded to, there would be a controling influence in the remainder, which would preserve the purity of Congress, and regulate the sales of land with impartial justice.

For similar reasons we should object to the proposed law to divide the *proceeds* of the sales of public lands among the states. Not only do we consider these proceeds to be as properly revenue, available for all the purposes of government, but we are sure that if any portion of them are to be expended for education, or internal improvement, the appropriations can be more judiciously made, and more economically expended by the United States, than by the states. Let those who are interested, inquire into the fate of some of the grants made to states for canals, and how the state legislatures have used the funds given them for a specific purpose. Let them look at the disposition of the college and school lands in at least two of the states, and they will see that valuable tracts which would have commanded a large advance on the government price, have been given away under a wretched system of favoritism and collusion, by which pre-emption rights, were given to persons who had settled on these lands, after they had been set apart for a specific purpose. The abuses of this description are numerous, and intimately known to those who have been engaged in politics. They should warn us to beware how we rashly endanger so extensive a property, and risk the many advantages we enjoy, under our admirable land system, by giving up any thing to the state legislatures, which may be retained in the hands of representatives more able, more experienced, and equally responsible to the people.

The following is the estimate of the amounts of money which would be paid to the several states, out of the surplus revenue now in the treasury, should the proposed distribution of the proceeds of the public lands take place:

	Share for each State.	15 per cent. to new States.	Total to new States.
Maine,	689,028		
New Hampshire,	464,587		
Massachusetts,	1,052,953		
Rhode Island,	167,650		
Connecticut,	513,472		
Vermont,	484,133		
New York,	3,309,503		
New Jersey,	551,865		
Pennsylvania,	2,325,424		
Delaware,	130,120		
Maryland,	700,079		
Virginia,	1,765,554		
North Carolina,	1,103,563		
South Carolina,	784,918		
Georgia,	741,423		
Kentucky,	1,072,660		
Tennessee,	1,078,578		

	Share for each State.	15 per cent. to new States.	Total to new States.
Ohio, - - - -	1,614,400	230,844	1,845,244
Louisiana, - - -	296,172	67,561	363,733
Indiana, - - - -	591,728	325,485	917,213
Illinois, - - - -	271,078	483,760	754,838
Missouri, - - - -	224,972	174,354	399,327
Mississippi, - - -	190,367	788,403	978,770
Alabama, - - - -	452,826	541,940	994,766

We hope that this controversy, if a controversy it is destined to be, will be conducted upon broad and national principles; that sectional interests will not be permitted to mingle in the discussion; and that this noble domain, the heritage of the American people, purchased with their treasure, and peopled under the auspices of their government, will remain, at least for a time, under the disposal of the national legislature. Whenever the wisdom or the liberality of Congress shall become questionable, or its purity less than that of the state legislatures; whenever the public lands shall be unequally distributed, or their proceeds appropriated with partiality; whenever the western states shall be oppressed, or the people believe themselves the objects of oppression, we shall advocate the disposal of the lands to the states in which they lie, or the distribution of the proceeds—but not until then.

The following data are condensed from an able report of Mr. Woodbury, the present Secretary of the Treasury:

The whole amount of lands now owned by the United States Government, within the states and territories, exceeds 330,000,000 of acres, and that owned west of the Mississippi, and of Missouri and Arkansas, exceeds 750,000,000. Of this last, about 80 millions have been appropriated to Indian tribes, the balance remains undisposed of. The Secretary estimates the one fourth or 270,000,000 as waste land, or covered with water, and one half of the whole too poor for cultivation for many years

Of the land owned by the government within the states and territories, there has been surveyed and offered for sale from the year 1789 to 1834, 122,000,000 of acres, not one third of which has been sold. The whole proceeds of the sales during that time, have amounted to about 50,000,000 of dollars, and the net proceeds after deducting charges, for purchase, surveying, management, &c., are about 4,000,000 of dollars.

The quantity actually sold from 1789 to 1834, a period of 45 years, after deducting about 6,333,333 acres, sold under the old credit system, and which afterwards reverted, was about 37,500,000 acres. The quantities bestowed in bounties, during the last war, and for schools and other purposes is about 16,000,000 of acres.

The sales never amounted in one year to one million of acres until 1815. In 1817 they amounted to 2,500,000 acres, and in 1819 under the credit system, and high price of cotton, to 5,500,000 acres, thus exceeding the sales of 1834, considerably. The price of cotton fell in 1820, and left the country indebted for lands, to nearly the amount of 22,000,000 of dollars. The credit system was then changed to cash, and by the relinquishment of the lands to the government, the debt was nearly extinguished. The annual sales again fell below one million of acres, and continued thus until 1825. In that year the price of cotton began to rise, and the quantity of land sold also increased, and in the year 1829, again exceeded one million of acres. From 1829 to 1834, there has been a steady enlargement of the quantity sold. In 1834 it amounted to 4,000,000 of acres, and in 1835, is estimated at 9,000,000 of acres. The Secretary estimates, that from the increase of our agricultural population, and other causes, the sales for the next six or seven years, will exceed 1,000,000 of acres, and that the proceeds may be estimated at from 3 to 6,000,000 annually. The exports of cotton in 1790, amounted to 500,000 pounds, in 1834 to 380,000,000 of pounds, whilst the home manufactures consumed 90,000,000 during the same year. We now furnish fifteen sixteenths of all the cotton consumed in Great Britain, and seven tenths of all that is consumed in France. The value of the fabrics manufactured from the raw material furnished by us, is to Great Britain $180,800,000, and to France $80,000,000, and to our own manufactures about $62,000,000.

CHAPTER XII.

Western Steamboats.

When we consider the unexampled rapidity with which the western states have acquired population and importance, we are surprised, not only at that fact, but at the inadequate ideas which have heretofore prevailed as to the magnitude and resources of this country. We are a traveling and a calculating people, and it seems strange that those who visited the western wilds in early times, should not have foreseen the events which have since transpired. That they did make golden reports, we are aware; but contrary to all experience in similar cases, those reports have fallen far short of the truth, and all that has been dreamed and prophesied in relation to this region, by its most sanguine admirers, has been more than realized. When a few hunters, encamped in the forests of Kentucky, heard the rumor of the battle of Lexington, and gave that name to the spot on which they reposed, how little could they have imagined, that within the duration of one human life, a town of excelling beauty, and a population remarkable for its intelligence and refinement, would spring to maturity in these shades—or that in the wilderness beyond them, a population would grow up within the same period, superior in number to that which was then contending for independence, against the most powerful nation of Europe! But when intelligent men, with better opportunities for observation, explored this region after the germs of its greatness had begun to expand, even they had but faint conceptions of its destiny. We shall endeavor to assign a few reasons why this country was thus underrated, and why it has outstripped the largest calculations which were made in its favor.

Fifty years ago, it was known that the western lands were fertile, and watered by fine rivers, and settlements were made on the eastern sides of the Ohio and Mississippi. But the inhabitants were exposed to the hostile attacks of the Indians, who occupied the whole region to the west and north, except a few spots held by the French. The hostile dispositions of the Indian tribes, and their superiority of numbers, rendered it dangerous to explore any part of the country in which they hunted, and impracticable to visit large portions of it. It was therefore but partially explored, and immense districts which are now considered in all respects the most desirable, were then totally unknown. As the Indians retired the country came into notice, as a fine landscape painting is disclosed by the gradual rising of a curtain. The parts that were settled were continually subject to invasion, and the inhabitants dreadfully harassed. The most shocking enormities were perpetrated; and only the hardiest pioneers ventured to reside near the frontier, or to explore the lands in the vicinity of such dangerous neighbors. Those atrocities no longer occur; the powerful arm of our government, and the mild influence of its pacific institutions, are felt from the Atlantic to the Rocky mountains, and on the remotest portion the dwelling of the pioneer is sacred. The murder of a white man by an Indian is now of rare occurrence; more rare than the murder of white men by each other; and the massacre of a family is no longer apprehended. This happy change has taken place since the last war with Great Britain; and we may attribute the rapid growth of the western country within the last fifteen years, chiefly to the security with which it has been explored and made known, and the safety enjoyed by the people, who have thus been enabled to spread over the surface in every direction.

The reported unhealthiness of the western country, was a great obstacle to its early settlement. The entire history of our population, from the landing of our ancestors on the Atlantic coast, until now, shows that new settlements are generally subject to violent, and rapidly fatal diseases; those west of the mountains have not been more greatly afflicted in this way than others of older date, but the pioneers suffered sufficiently to excite the alarm of the timid, and to give rise to reports which were greatly exaggerated.

The country was at first difficult of access; indeed, for all the beneficial purposes of commerce it was almost inaccessible. The port of New Orleans, and the country bordering on the Mississippi, were held by Spain, by whom our right to navigate that river was denied. Had the latter privilege been conceded to us, the possession by a foreign power of the only port of entry, and place of deposit, which was accessible to the western people, must have rendered the trade in that direction precarious, by subjecting it to expensive duties, and frequent interruptions. Setting these difficulties aside, New Orleans was not then, as it is now, a large commercial city; it was a small town, without capital or enterprise, and reputed to be so fatally unhealthy, that its future growth was considered as entirely improbable. And, the navigation from that place, to our northern ports, on the Atlantic coast, was, as it still remains to a considerable extent, dangerous and expensive; while the ascent of the Mississippi, against its mighty current, by means of the boats then in use, was a slow and most laborious process.

The communication through our own interior was quite as unpromising. The Allegheny ridge formed a barrier, which was then almost impassable. The width of this chain is seldom less than sixty miles; and it presents in its whole extent a series of mountains, cliffs, and chasms, as wild and hideous in their appearance, as they seem insurmountable in their character. No practical man of that day, imagined the remote probability of constructing a good road through this district. To climb its precipices, to hew down its rocks, to throw bridges over its gulphs, to pass its headlong torrents,—in short, to enable the traveler to journey with ease and rapidity over this alpine region, has been the recent work of genius and enterprise, and the result of a spirit peculiar to our own times.

The purchase of Louisiana, the free navigation of the Mississippi, the increased importance of the New Orleans market, the improvements in the coasting navigation, the New York, Pennsylvania, and Ohio canals, and the turnpikes which cross the mountains at various points, may be set down as among the causes which have led to the rapid growth of this country; and it may be added, that many of these events were as unforeseen as they have been eminently great and advantageous. Some of them have all the brilliancy of splendid achievement, and all of them have contributed to increase the wealth, and elevate the character of the nation.

The introduction of steam boats upon the western waters, deserves a separate mention, because it has contributed more than any other single cause, perhaps more than all other causes which have grown out of human skill, combined, to advance the prosperity of the west. The striking natural features of this country are, its magnitude —its fertility—its mineral wealth—the number and extent of its rivers. Its peculiar adaptation to commercial purposes, is evident. The richness of the soil, and the abundance of all the useful minerals, combine to render agricultural labors easy, cheap, and greatly productive. The amount of produce raised for consumption, and for export, is great; and the people are therefore not only able, but liberally disposed, to purchase foreign products. They do, in fact, live more freely, and purchase more amply, than the farmers of any other country. The amount, therefore, of commercial capital employed, as compared with the amount of population, is great; and the vast superficial extent of country over which these operations may be extended with safety and facility, and whose products may be exchanged, concentrated, or distributed, is unexampled. There is nothing in the topography of any other country, to compare with the western rivers. The Mississippi, and her tributaries may be navigated in various directions, to the distance of two thousand miles from the ocean; and every portion of this immense plain is intersected by these natural canals. In these respects nature has been prodigal; it was left to human skill and energy, to turn her gifts to the best advantage, and never was the intellect of man more usefully employed than in the discovery and successful introduction of steam navigation. It was all that the western country needed; and the name of Fulton should be cherished here with that of Washington: if the one conducted us to liberty, the other has given us prosperity—the one broke the chains which bound us to a foreign country, the other has extended the channels of intercourse, and multiplied the ties which bind us to each other.

The rapidity with which new channels of trade have been opened, and are now daily becoming developed, is astonishing; but the improvements in navigation, and in the facilities for transporting merchandise by land and water, have been infinitely greater and more remarkable.

It is needless to do more than mention the Indian canoe, the smallest and rudest of boats, but which, at a period but little beyond the memory of living witnesses, was the only vessel that navigated our western rivers. For the purpose of commerce they were entirely inadequate, and were never used in any regular branch of trade.

Previous to their intercourse with the whites, the canoes of the Indians must have been much more unwieldy, and imperfect, than any that are now in use. They had no tools except the clumsy axes made of stone, of which we see specimens in our museums; and their canoes were made of solid logs by burning away the part intended to be removed. Some of the most distant tribes, who have little trade with our people still pursue the same laborious and unsatisfactory process. When iron tools were introduced, the canoe assumed the present shape.

The birch canoe is peculiar to the northern regions, where the tree which supplies the bark is found. These also were probably of the most crude and awkward construction, previous to the visits of the French traders, under whose direction they acquired the lightness, strength, and beauty, which have given them their celebrity.

The earliest improvement upon the canoe, was the Pirogue, an invention of the whites. Like the canoe, this boat is hewed out of the solid log; the difference is, that the pirogue has greater width and capacity, and is composed of several pieces of timber—as if the canoe was sawed lengthwise into two equal sections, and a broad flat piece of timber inserted in the middle, so as to give greater breadth of beam to the vessel. This was probably the identical process, by which the Europeans, unable to procure planks to build boats, began in the first instance to enlarge canoes, to suit their purposes. They were often used as ferryboats, to transport horses across our rivers, and we have frequently seen them in operation, of a sufficient size, to effect their object in perfect safety.

These were succeeded by the *barge*, the *keel*, and the *flat boat*. Of the two first, the barge was the largest, had the greatest breadth, and the best accommodations for passengers, the keel was longer, had less depth, and was better fitted to run in narrow and shallow channels. They were navigated by a rude and lawless class of men, who became distinguished as well for their drolleries, as for their predatory and ferocious habits. In the then thinly scattered state of the population, their numbers rendered them formidable, as there were few villages on the rivers, and still fewer settlements, which contained a sufficient number of able bodied men, to cope with the crew of a barge, consisting usually of thirty or forty hands; while the arrival of several of these boats together, made them completely masters of the place. Their mode of life, and the facilities they possessed for evading the law, were such as would naturally make them reckless. Much of the distance through which they traveled in their voyages, was entire wilderness, where they neither witnessed the courtesies of life, nor felt any of the restraints of law; and where for days, perhaps weeks, together, they associated only with each other. The large rivers whose meanders they pursued, formed the boundaries of states, so that living continually on the lines which divided different civil jurisdictions, they could pass with ease from one to the other, and never be made responsible to any.

One of the earliest attempts at an intercourse with New Orleans, by the river, is so remarkable as to deserve a separate mention. In 1776, Messrs. Gibson and Linn, the grandfather of Dr. Linn, now a senator in Congress from Missouri, descended by water from Pittsburgh to New Orleans, to procure military stores for the troops stationed at the former place. They completely succeeded in their hazardous enterprise, and brought back a cargo of 136 kegs of gunpowder. On reaching the Falls of Ohio on their return in the spring of 1777, they were obliged to unload their boats, and carry the cargo round the rapids, each of their men carrying three kegs at a time on his back. The powder was delivered at Wheeling, and afterwards transported to Fort Pitt.

The character of Mike Fink, "the last of the boatmen," has been rendered familiar to most readers, by the pen of one of our best writers. He was a leader of the men of his own class; and was famous for his herculean strength, his contempt of danger, his frolics, and his depredations. He was a coarse, vulgar, desperate man—yet possessed a degree of humor, hilarity, and openness, that made him remarkable, and conciliated for him a sort of popularity, which caused him to be universally known, and still preserves his name in tradition. In his calling, as master of a boat, he was faithful—a quality which seems to have belonged to most of his class; for it is a singular fact, that lawless and wild as these men were, the valuable cargoes of merchandise committed to their care, and secured by no other bond than their integrity, were always carried safely to their places of destination, and the traveler, however weak, or however richly freighted, relied securely on their protection.

In the earlier periods of this navigation, the boats employed in it were liable to attacks from the Indians, who employed a variety of artifices to decoy the crews into their power. Sometimes a single individual, disguised in the apparel of some unhappy white man, who had fallen into their hands, appeared on the shore making signals of distress, and counterfeiting the motions of a wounded man. The crew supposing him to be one of their countrymen, who had escaped from the Indians, would draw near the shore for the purpose of taking him on board; nor would they discover the deception until, on touching the bank, a fierce band of painted warriors, would rush upon them from an artfully contrived ambuscade. Sometimes the savages crawled to the water's edge, wrapped in the skins of bears, and thus allured the boatmen, who were ever ready to exchange the oar for the rifle, into their power. But the red warriors were often sufficiently numerous to attempt by open violence, that which they found it difficult to accomplish by artifice, against men as wary, and as expert in border warfare, as themselves; and boldly pursued the boats in their canoes, or rushed upon the boatmen, when the incidents, or the perils, of their navigation, drove them to the shore.

These boats, but rarely using sails, and receiving only an occasional impulse from their oars, descended the stream with a speed but little superior at any time, to that of the current; while they met with many accidents and delays to lengthen the voyage. A month was usually consumed in the passage from Pittsburgh to New Orleans, while the return voyage was not effected in less than four months, nor without a degree of toil and exposure to which nothing but the hardiest frames, and the most indomitable spirits, would have been equal. The heavily laden boats were propelled against the strong current by poles, or, where the stream was too deep to admit the use of those, drawn by ropes. The former process required the exertion of great strength and activity, but the latter was even more difficult and discouraging—as the laborer, obliged by the heat of the climate to throw aside his clothing, and exposed to the burning rays of the sun, was forced to travel on the heated sand, to wade through mire, to climb precipitous banks, to push his way through brush, and often to tread along the undermined shore, which giving way under his feet precipitated him into the eddying torrent of the Mississippi. After a day spent in toils which strained every muscle to its utmost power of exertion, he threw himself down to sleep, perhaps in the open air, exposed to the cold damps and noxious exhalations of the lower Mississippi, and the ferocious attacks of millions of musquitoes, and reposed as unconscious of danger, or inconvenience, as the native alligator which bellowed in the surrounding swamps, The *flat* boat, was introduced a little later than the others. It is a rough strong boat, with a perfectly flat bottom, and perpendicular sides; and covered throughout its whole length. Being constructed to float only with the current, it never returns after descending the river. These boats were formerly much used by emigrating families, to transport themselves down the Ohio, and are still built in great numbers on the various tributary streams, and floated out in high water, with produce for New Orleans.

The French who navigated the northern lakes, the Mississippi, and its tributaries, adopted, in their trade, the use of the Indian birch canoe. McKenney, in his "Tour to the Lakes," thus describes one of those boats. "Its length is thirty feet, and its breadth across the widest part, about four feet. It is about two and a half feet deep in the centre, but only about two feet near the bow and stern. Its bottom is rounded, and has no keel."

"The materials of which this canoe are built, are birch bark and red cedar, the whole fastened together with *wattap*, and gum, without a nail, or bit of iron of any sort to confine the parts. The entire outside is bark—the bark of the birch tree—and where the edges join at the bottom, or along the sides, they are sewn with this *wattap*, and then along the line of the seam it is gummed. Next to the bark are pieces of cedar, shaven thin, not thicker than the blade of a knife—these run horizontally, and are pressed against the bark by means of these ribs of cedar, which fit the shape of the canoe, bottom and sides, and coming up to the edges, are pointed, and let into a rim of cedar of about an inch and a half wide, and an inch thick, that forms the gunwale of the canoe, and to these by means of the wattap, the bark and ribs are all sewed; the wattap being wrapped over the gunwale, and passed through the bark and ribs. Across the canoe are bars, some five or six, to keep it in shape.

These are fastened by bringing their ends against the gunwale, or edge, and fastening them to it with *wattap*. The seats of the voyageurs, are along side of, but below the bars, and are of plank, some four inches wide, which are swung, by means of two pieces of rope, passed through each end, from the gunwale."

These boats were so light, and so easily damaged, that precautions were necessary to be taken in loading them, yet the one described above, carried not less than two thousand pounds. With these frail vessels the French navigated the western rivers, and crossed the largest lakes, carrying on a most extensive traffic. The great peculiarity of this navigation is, that these light canoes are carried with facility from one river to another, or around the rapids and cascades, over which they cannot float. Their lading is accordingly made up into packages, each of which may be carried by one man, and these are transported over the portages, on the backs of the *engageés*, by means of straps passed over the forehead. These boats are still used in the fur trade.

As a curious illustration of the rapid improvement of our western vessels, and the growth of our trade, I copy the following advertisement from a newspaper called "The Centinel of the Northwestern Territory," under date of Saturday, January 11, 1794, by which it will be seen that at that time four keel boats, carrying probably not more than 20 tons each, were supposed to be sufficient for the trade between Cincinnati and Pittsburgh, and that these were prepared to defend themselves against *enemies*.

"OHIO PACKET BOAT."

"Two Boats for the present will start from *Cincinnati* for *Pittsburgh*, and return to *Cincinnati* in the following manner, *viz:*

"First boat will leave Cincinnati this morning at eight o'clock, and return to Cincinnati, so as to be ready to sail again in four weeks from this date.

"Second boat will leave Cincinnati oh Saturday the 30th inst. and return to Cincinnati in four weeks as above.

"And so regularly, each boat performing the voyage to and from Cincinnati to Pittsburgh *once in every four weeks.*

"Two boats, in addition to the above will shortly be completed and regulated in such a manner that one boat of the four will set out weekly from Cincinnati to Pittsburgh, and return in like manner.

"The proprietor of these boats, having maturely considered the many inconveniences and dangers incident to the common method hitherto adopted of navigating the Ohio, and being influenced by a love of philanthropy and a desire of being serviceable to the Public, has taken great pains to render the accommodations on board the boats as agreeable and convenient as they could possibly be made.

"No danger need be apprehended from the enemy, as every person on board will be under cover made proof against rifle or musket balls, and convenient port holes for firing out of. Each of the boats are armed with six pieces carrying a pound ball; also a number of good muskets, and amply supplied with plenty of ammunition: strongly manned with choice hands, and the masters of approved knowledge.

"A separate cabin from that designed for the men, is partitioned off in each boat for accommodating ladies on their passage. Conveniences are constructed on board each boat, so as to render landing unnecessary, as it might, at times, be attended with danger.

"Rules and Regulations for maintaining order on board, and for the good management of the boats, and tables accurately calculated for the rates of freightage, for passengers and carriage of letters to and from *Cincinnati* to

Pittsburgh; also a table of the exact time of the arrival and departure to and from the different places on the Ohio, between *Cincinnati and Pittsburgh*, may be seen on board each boat and at the printing office in Cincinnati. Passengers will be supplied with provisions and liquors of all kinds of the first quality, at the most reasonable rates possible. Persons desirous of working their passage, will be admitted on finding themselves; subject, however, to the same order and directions from the master of the boats as the rest of the working hands of the boat's crew.

"An *Office of Insurance* will be kept at *Cincinnati, Limestone, and Pittsburgh*, where persons desirous of having their property insured may apply. The rates of insurance will be moderate."

Such were the vessels in which the whole trade of the western rivers was carried on, previous to the year 1811. Nor was the transportation by land farther advanced in improvement. The few roads that crossed the mountains were so wretchedly bad that wagons toiled over them with great difficulty, and a large portion of the merchandise was carried on the backs of horses. Even that was considered a triumphant result of enterprise, and a rapid advance in improvement; for a few years only had then advanced, since Mr. Brown, a delegate from Kentucky, in Congress, had been smiled at as a visionary, by the members of that august body, for asking the establishment of a mail to Pittsburgh, to be carried on horseback once in two weeks. He was told that such a mail was not needed, that it probably would never be required, and that the obstacles of the road were insuperable. That venerable patriot has lived to see the establishment of *two* daily mails on the same route; while the canals, the railways, and the turnpikes that lead to the west, have rendered it accessible, with ease and safety, to every species of vehicle.

We proceed now to give some account of the steamboat navigation of these rivers, and shall first speak of some early attempts towards the accomplishment of this object.

Mr. James Rumsey, of Berkeley county, Virginia, invented a plan for propelling boats by steam as early as 1782, and in 1784 obtained from the legislature of Virginia, the exclusive right of navigating her waters with such boats. In 1788, he published his project, in general terms, together with numerous certificates from the most respectable characters in Virginia, among whom was General Washington, all of which assert, that a steamboat was actually constructed, which moved with half her burthen on board, at the rate of three or four miles an hour, against the current of the Potomac, although the machinery was in a very imperfect state. In 1819, his brother, Dr. Rumsey, of Kentucky, built a boat after this model; and at that time it was said that the Rumsey plan united simplicity, strength, economy, and lightness, in a degree far superior to any other. The more complex machinery of Bolton and Watt, Fulton, and Evans, have however been more successful.

In 1785, John Fitch, a watchmaker in Philadelphia, conceived the design of propelling a boat by steam. He was both poor and illiterate, and many difficulties occurred, to frustrate every attempt which he made, to try the practicability of his invention. He applied to Congress for assistance, but was refused; and then offered his invention to the Spanish government, to be used in the navigation of the Mississippi, but without any better success. At length, a company was formed, and funds subscribed, for the building of a steamboat, and in the year 1788, his vessel was launched on the Delaware. Many crowded to see and ridicule the novel, and as they supposed, the chimerical experiment.

It seemed that the idea of wheels had not occurred to

Mr. Fitch; but instead of them, oars were used, which worked in frames. He was confident of success; and when the boat was ready for the trial, she started off in good style for Burlington. Those who had sneered, began to stare, and they who had smiled in derision, looked grave. Away went the boat, and the happy inventor triumphed over the scepticism of an unbelieving public. The boat performed her trip to Burlington, a distance of twenty miles; but unfortunately burst her boiler in rounding to the wharf at that place, and the next tide floated her back to the city. Fitch persevered, and with great difficulty procured another boiler. After some time, the boat performed another trip to Burlington and Trenton, and returned in the same day. She is said to have moved at the rate of eight miles an hour; but something was continually breaking, and the unhappy projector only conquered one difficulty to encounter another. Perhaps this was not owing to any defect in his plans, but to the low state of the arts at that time, and the difficulty of getting such complex machinery made with proper exactness. Fitch became embarrassed with debt, and was obliged to abandon the invention, after having satisfied himself of its practicability.

This ingenious man, who was probably the first inventor of the steamboat, wrote three volumes, which he deposited in manuscript, sealed up, in the Philadelphia library, to be opened thirty years after his death. When, or why, he came to the west we have not learned; but it is recorded of him, that he died and was buried near the Ohio. His three volumes were opened about five years ago, and were found to contain his speculations on mechanics. He details his embarrassments and disappointments, with a feeling which shows how ardently he desired success, and which wins for him the sympathy of those who have heart enough to mourn over the blighted prospects of genius. He confidently predicts the future success of the plan, which in his hands, failed only for the want of pecuniary means. He prophesies that in less than a century, we shall see our western rivers swarming with steamboats; and expresses a wish to be buried on the shores of the Ohio, where the song of the boatman may enliven the stillness of his resting place, and the music of the steam engine soothe his spirit. What an idea! Yet how natural to the mind of an ardent projector, whose whole life had been devoted to one darling object, which it was not his destiny to accomplish! And how touching is the sentiment found in one of his journals:—"the day will come when some more powerful man, will get fame and riches from my invention; but nobody will believe that *poor John Fitch* can do any thing worthy of attention." In less than thirty years after his death, his predictions were verified. He must have died about the year 1799.

"The first steam boat built on the western waters," says a writer in the Western Monthly Magazine, "was the Orleans, built at Pittsburgh in 1811; there is no account of more than seven or eight built previously to 1817; from that period they have been rapidly increasing in number, character, model, and style of workmanship, until 1825, when two or three boats built about that period were declared by common consent to be the finest in the world. Since that time, we are informed, that some of the New York and Chesapeake boats, rival and probably surpass us, in richness and beauty of internal decoration. As late as 1816, the practicability of navigating the Ohio with steamboats, was esteemed doubtful; none but the most sanguine augured favorably. The writer of this well remembers that in 1816, observing in company with a number of gentlemen, the long struggles of a stern wheel boat to ascend Horse-tail ripple (five miles below Pittsburgh) it was the unanimous opinion, that 'such a contrivance' might conquer the difficulties of the Mississippi, as high as Nacthez, but that we of the Ohio must wait for some 'more happy century of inventions.'"

We can add another anecdote to that of our friend which we have quoted. About the time that Fulton was building his first boat at Pittsburgh, he traveled across the mountains in a stage, in company with several young gentlemen from Kentucky. His mind was teeming with those projects, the successful accomplishment of which has since rendered his name so illustrious—and his conversation turned chiefly upon steam, steamboats, and facilities for transportation. Upon these subjects he spoke frankly, and his incredulous companions, much as they respected the genius of the projector, were greatly amused at what they considered the extravagance of his expectations. As the journey lasted several days, and the party grew familiar with each other, they ventured to jest with Mr. Fulton, by asking if he could do this, and that by steam; and a hearty laugh succeeded whenever the single-minded and direct inventor, asserted the power of his favorite element. At length, in the course of some conversation on the almost impassable nature of the mountains, over which they were dragged with great toil, upon roads scarcely practicable for wheels, Mr. Fulton remarked, "the day will come, gentlemen—I may not live to see it, but some of you who are younger, probably will—when carriages will be drawn over these mountains by steam engines, at a rate more rapid than that of a stage upon the smoothest turnpike." The apparent absurdity of this prediction, together with the gravity with which it was uttered, excited the most obstreperous mirth in this laughter loving company, who roared, shouted, and clapped their hands, in the excess of their merry excitement. This anecdote was repeated to us by one of that party; who two years ago, on finding himself rapidly receding from Baltimore in a rail road car, recollected the prediction of Fulton, made twenty years before.

The improvement in steamboats has been so rapid, and the incidents attending them so interesting, that we shall, at the hazard of rendering the subject tedious, give a particular history of a few of the earliest that were built.

1. The *Orleans*, 400 tons, the first boat built at Pittsburgh, was owned and constructed by Mr. Fulton. Sailed from Pittsburgh in December 1812, and arrived at New Orleans about the 24th of the same month. She continued to run between New Orleans and Natchez, making her voyages to average 17 days, and was wrecked near Baton Rouge, in 1813 or 14, by striking a snag, on an upward bound passage.

2. The *Comet*, 25 tons, owned by Samuel Smith; built at Pittsburgh by D. French; stern wheel, and vibrating cylinder, on French's patent, granted in 1809. Made a voyage to Louisville in the summer of 1813, descended to New Orleans in the spring of 1814, made two voyages thence to Natchez, and was sold,—and the engine put up in a cotton gin.

3. The *Vesuvius*, 340 tons, built at Pittsburgh, by Mr. Fulton, and owned by a company at New York and New Orleans. Sailed for New Orleans in the spring of 1814, commanded by Captain Frank Ogden. She sailed from New Orleans for Louisville, about the 1st of June following; grounded on a sand bar 700 miles up the Mississippi, where she lay until the 3d of December following, when the river rose, and floated her off. She returned to New Orleans, where she run aground a second time on the Batture, where she remained until March 1st, when a rise of water set her afloat. She was then employed, some months, between New Orleans and Natchez, under the command of Captain Clemment, who was succeeded by Captain John De Hart; shortly after, she took fire near the city of New Orleans and burned to the water's edge, having a valuable cargo on board. Her hull was afterwards

raised and built upon, at New Orleans. She was since in the Louisville trade, was sold to a company at Natchez, and condemned in 1819.

4. The *Enterprise*, 45 tons, built at Brownsville, Pa. on the Monongahela, by Daniel French, under his patent, and owned by a company at that place. She made two voyages to Louisville in the summer of 1814, under the command of Captain J. Gregg. On the 1st December, she took in a cargo of ordnance stores at Pittsburgh, and sailed for New Orleans, commanded by Captain Henry M. Shreve, and arrived at New Orleans on the 14th of the same month. She was then despatched up the river in search of two keel boats, laden with small arms, for General Jackson's army, which had been delayed on the way; and returned with the cargoes of these after an absence of six days and a half, in which time she ran 624 miles. For some time after, she was actively engaged in transporting troops. She made one voyage to the gulf of Mexico as a cartel, one voyage to the rapids of Red river with troops, and nine voyages to Natchez. She set out for Pittsburgh on the 6th of May 1817, and arrived at Shippingsport, (Louisville) on the 30th, 25 days out, being the first steamboat that ever arrived at that port from New Orleans. The citizens of Louisville gave a public dinner to Captain Shreve for having accomplished in twenty five days, a trip, which previous to that time had never been accomplished, by the barges and keel boats, in less than three months. The Enterprise proceeded to Pittsburgh, the command was then given to Captain D. Worley, who lost her in Rock Harbour, Shippingsport.

5. The *Ætna*, 340 tons, built at Pittsburgh, and owned by the same company as the Vesuvius. Sailed from Pittsburgh for New Orleans in March 1815, under the command of Captain A. Gale, made the voyage, and then went into the Natchez trade—was commanded by Captain

R. De Hart who made six voyages in her, and then again by Captain Gale.

6. The *Despatch*, 25 tons, built at Brownsville in 1817, on French's patent, and owned by the same company as the Enterprise. She made several voyages from Pittsburgh to Louisville, and one from New Orleans to Shippingsport, where she became a wreck in 1820, and her engine was taken out.

7. The *Buffaloe*, 300 tons, was built at Pittsburgh by Mr. Latrobe.

8. The *James Monroe*, 120 tons, was built at Pittsburgh by Mr. Latrobe.

9. The *Washington*, 400 tons, built at Wheeling; contracted and part owned by Captain H. M. Shreve; her engine was made at Brownsville under the immediate direction of Captain Shreve. Her boilers were on the upper deck, and she was the first boat on that plan, since so generally in use. The Washington crossed the Falls, September 1816, under Captain Shreve, went to New Orleans, and returned to Louisville in the winter. In March 1817 she went from Louisville to New Orleans and returned in 45 days. This was the trip that first convinced the despairing public that steamboat navigation would succeed on the western waters.

10. The *Franklin*, 125 tons, built at Pittsburgh by Messrs. Shiras and Cromwell; engine made by George Evans. She sailed from Pittsburgh in December 1816, was sold at New Orleans, went into the Louisville and St. Louis trade, and was sunk near St. Genevieve in 1819.

11. The *Oliver Evans*, 75 tons, was built at Pittsburgh by George Evans; engine, his patent. Left Pittsburgh, December 1816, for New Orleans. Burst one of her boilers in April 1817, at Point Coupee, by which eleven men, chiefly passengers, were killed. Never did much business afterwards.

12. The *Harriet*, 40 tons, built at Pittsburgh, owned

and constructed by Mr. Armstrong of Williamsport Pa. She sailed from Pittsburgh, October 1816, for New Orleans, crossed the Falls in March 1817, made one voyage to New Orleans, and has since been running between that place and the Muscle shoals.

We shall not proceed any further with this list, as it would occupy more room than could be usefully devoted to such a purpose. Our object in giving the particulars of the history of a few of the first boats, in their regular order, is to show the progress that was made in the first years of the introduction of steamboats, and the difficulties which frowned upon the enterprise. The first advance was slow, and the prospects very discouraging. The *fourth* boat that descended the river, was the *first* to reascend as far as Louisville, and even then it was considered doubtful whether steamboats could be rendered useful as a mode of navigation for the ascending trade. It was not until 1816, when the boat which was about the *ninth* in the order of building, having been conducted from Louisville to New Orleans and back in 45 days, by Captain Henry M. Shreve, the question of practicability was considered as settled.

Many of the obstacles which impeded the rapid advance of steamboat navigation were such as were incident to an infant and imperfect state of the art of constructing both boats and engines; while others were inseparable from the condition of the country. In accounting for the length of the earliest voyages, something must be allowed to both these classes of causes, and among the latter may be mentioned the important facts, that the shores of the Ohio and Mississippi were then comparatively unsettled, fuel was not an article of traffic, but was procured from the growing forest by the crews of the boats, and used in its green state; while accidental injuries were repaired with equal inconvenience and delay.

The *General Pike* built at Cincinnati in 1818, and intended to ply as a packet between Maysville, Cincinnati, and Louisville, is said to have been the first steamboat constructed on the western waters for the exclusive convenience of passengers. Her accommodations were ample, her apartments spacious and superbly furnished, and her machinery of superior mechanism. She measured 100 feet keel, 25 feet beam, and drew only 3 feet 3 inches water. The length of her cabin was 40 feet, the breadth 25 feet, in addition to which were fourteen state rooms. The boats previously built had been intended solely for the transportation of merchandise; these objects have subsequently been successfully united.

The *Calhoun*, 80 tons, built at Frankfort in 1818, the *Expedition*, 120 tons, and the *Independence*, 50 tons,—the two last built at Pittsburgh—were constructed for the exploration of the Missouri river, in what was popularly termed the Yellow Stone Expedition, projected by Mr. Calhoun, while secretary of war. The Independence was the first steamboat that ascended the powerful current of the Missouri.

The *Post Boy*, 200 tons, built at New Albany, by Captain Shreve, and others, in 1819, was intended for the conveyance of the mail between Louisville and New Orleans, under an act of congress passed in March 1819. This was the first attempt on the western waters to carry the mail in steamboats.

The *Western Engineer*, was built near Pittsburgh in 1818 under the direction of Major S. H. Long, of the United States Topographical Engineers, for the expedition of discovery to the sources of the Missouri, and the Rocky mountains, which was afterwards so honorably accomplished by himself and his companions. This boat ascended as high as the Council Bluffs, about 650 miles above St. Louis, and was the first steamboat, that reached that point.

For further particulars with regard to individual boats, we refer to copious alphabetical tables, which will accompany these notes. We proceed to present some calculations which we have collected from different, but authentic sources.

The following remarks are from the pen of Morgan Neville, Esq. and were written in 1829.

"The average cost of a steamboat is estimated at one hundred dollars per ton; the repairs made during the existence of a boat, amount to one half the first cost. The average duration of a boat has hitherto been about four years; of those built of locust, lately, the period will probably be two years longer. The amount of expenditure in this branch of business on the western waters, then, for the last ten years, will in some measure be shown by the following calculation:

56,000 tons, costing 100 dollars per ton, amount to	$5,600,000
Repairs on the same, - - - - -	2,800,000
Expending in building and repairing in ten years,	$8,400,000

"The annual expenditure of steamboats is very difficult to be arrived at: the importance of this expenditure however, to the towns on our rivers, and to the whole extent of country running along their shores, may be estimated from the following calculation of the item of fuel alone, for one year—take the present year, 1829. We have now in operation above 200 boats, the tonnage of which may be stated at 35,000 tons.

"It is calculated that the business of each year lasts eight months; deduct one fourth for the time lost in port, and we have six months, or 180 days, of running time. Each boat is presumed to consume one cord of wood, for every 12 tons, every 24 hours.

The 35,000 tons then consume *per day*, -	2,917 cords.
Or, during the six months, - -	525,060 cords.

"The price of wood varies from one dollar and a half, to five dollars per cord; a fair average would place it at $2.25 per cord. This makes the expenditure for fuel alone, on the banks of our rivers, $1,181,385, for this year. The other expenditures, while running, are calculated by the most experienced and intelligent owners, to be equal to $1,300,000, which gives the total expenditure for 1829 at $2,481,385.

"This calculation and estimate, then, which are both made lower than the facts justify, present these results:

The amount of first cost of steamboats, since 1817,	$5,600,000
Repairs on the same,	2,800,000
Total amount of expenditure, produced by the introduction of steamboats, for building and repairs,	$8,400,000

"We cannot better illustrate the magnitude of the change in every thing connected with western commerce and navigation, than by contrasting the foregoing statement, with the situation of things at the time of the adoption of steam transportation, say in 1817. About twenty barges, averaging 100 tons each, comprised the whole of the commercial facilities for transporting merchandise from New Orleans to the "Upper country;" each of these performed one trip down and up again to Louisville and Cincinnati within the year. The number of keel boats employed in the upper Ohio, cannot be ascertained, but it is presumed that 150 is a sufficiently large calculation to embrace the whole number. These averaged 30 tons each, and employed one month to make the voyage from Louisville to Pittsburgh, while the more dignified barge of the Mississippi made her trip in the space of 100 days, if no extraordinary accident happened, to check her progress. Not a dollar was expended for wood, in a distance of 2,000 miles, and the dweller on the banks of the Ohio thought himself lucky if the reckless boatmen would give the smallest trifle for the eggs and chickens which formed almost the only saleable articles on a soil whose only fault is its too great fertility. Such was the case twelve years since. The Mississippi boats now make five or six trips within the year, and are enabled, if necessary, within that period to afford to that trade 135,000 tons. Eight or nine days are sufficient on the upper Ohio, to perform the trip from Louisville to Pittsburgh and back. In short, if steam has not realized the hyperbole of the poet in 'annihilating time and space,' it has produced results scarcely surpassed by the introduction of the art of printing."

From another valuable article of the same gentleman we copy the following very interesting remarks:

"On the first day of January, 1834, an official list of steamboats from an authentic source, gives the whole number of two hundred and thirty, then in existence, whose aggregate amount of tonnage is equal to about thirty-nine thousand tons. Allowing the cost of building at a rate much lower than the rule adopted three years since, the capital now invested in this stock will exceed three millions of dollars. The expense of running may be put down nearly as contained in the following scale:

60 boats over 200 tons, 180 running days at $140 per day, - - - - -	$1,512,000 00
70 boats from 120 tons to 200, 240 running days, $90 dollars per day, - - -	1,512,000 00
100 boats under 120 tons, 270 running days, $60 per day, - - - - - -	1,620,000 00
Total yearly expenses,	$4,644,000 00

"This sum may be reduced to the different items producing it in the following proportions, viz:

For wages, 36 per cent., equal to - -	$1,671,840 00
" wood, 30 per cent., equal to - - -	1,393,200 00
" provisions, 18 per cent., equal to - -	835,920 00
" contingencies, 16 per cent., equal to -	743,040 00

"This result is truly striking to those who were accustomed to the state of things on our rivers within twenty years. The difference in the amount of wages paid, is in itself very considerable; but the item of fuel is one created exclusively by steamboats; and when it is considered that nearly one million and a half is expended every year, at a few points on the Mississippi valley, it presents a vast field for speculation. The immense forests of beech and other timber unfit for agricultural purposes, were, before, not only useless, but an obstacle to the rugged farmer, who had to remove them before he could sow and reap. The steamboat, with something like magical influence, has converted them into objects of rapidly increasing value. He no longer looks with despondence on the denseness of trees, and only regrets that so many have already been given to the flames, or cast on the bosom of the stream before him.

"At the present period, the steamboats may be considered as plying as follows, viz:

25 over 200 tons, between Louisville, New Orleans, and Cincinnati, measuring	8484	tons.
7 between Nashville and New Orleans, measuring	2585	"
4 between Florence and New Orleans,	1617	"
4 in the St. Louis trade,	1002	"
7 in the cotton trade,	2016	"
57 boats not in established trades, from 120 to 200 tons,	8641	"
The balance under 120 tons in various trades,	14655	"
	39,000	

"In the New Orleans and Louisville trade, the boats over two hundred tons make about one hundred and fifty trips in prosperous seasons; those of smaller size, make from fifty to sixty trips. But to go into an estimate of the number of voyages made by the boats in the different trades is impossible, because no regular data are furnished, and the result depends upon a variety of contingencies."

"Previous to 1817, about 20 barges, afforded the only facilities for transporting merchandise from New Orleans to Louisville and Cincinnati. These, making but one trip in the year, gave the means of bringing up only two thousand tons. The present tonnage in this trade exclusively, having been stated to be 8484 tons, gives the amount employed, calculating one hundred and fifty trips in the season, to be 50,904 tons; a cause capable of producing a revolution in sixteen years hardly equalled in the annals of history. The effects upon western commerce have been immense. The moral changes alone which are felt throughout the west on prices is almost incalculable: the imported article has fallen in a ratio equal to the increased price of western products. In looking back at the old means of transportation, we cannot conceive how the present demand and consumption could have been supplied by them."

"To those who have been acquainted with the early mercantile history of our country, when it was no uncommon thing for a party of merchants to be detained in Pittsburgh from six weeks to two months, by low water, or ice, the existing state of things is truly gratifying. The old price of carriage of goods from the Atlantic seaboard to Pittsburgh, was long estimated at from five to eight dollars per hundred pounds. We have instances in the last five years, of merchandise being delivered at the wharf of Cincinnati for one dollar per hundred pounds, from Philadelphia, by way of New Orleans."

"It may not be useless or uninteresting to give an idea of the *mortality* among steamboats in a given time. It is not pretended that any decided inference can be drawn from this statement, or that the facts go to establish any fixed rule. But under the present situation of steamboat discipline and regulation a tolerably fair conclusion can be drawn from it. Taking the period then of two years, from the fall of 1831 till that of 1833, we have a list of boats gone out of service, of *sixty six:* of these *fifteen* were abandoned, as unfit for service; *seven* were lost by ice; *fifteen* were burnt; *twenty-four* snagged, and *five* destroyed by being struck by other boats. Deducting the *fifteen* boats abandoned as unseaworthy, we have *fifty one* lost by accidents peculiar to the trade. In number this proportion is over *twelve per cent.* per annum; in tonnage the loss is upwards of ten per cent. Amount snagged, 3721 tons; amount burned 2330 tons.

A curious fact was ascertained by a committee of gentlemen, who were appointed a few years ago, by a number of steamboat owners, to investigate the whole subject. They satisfied themselves, that although the benefits conferred on our country, by steam navigation, were incalculable, the stock invested in boats, was, as a general rule, a losing investment. In a few cases owing to fortuitous events, or to the exercise of more than usual prudence, money has been made: but the instances are so few as not to affect the rule. One gentleman, who has been engaged for years in the ownership of steamboats, and has been peculiarly fortunate, in not meeting with any loss by accident, assured the writer, that his aggregate gain during the whole series of years, was only about six per cent. per year, on the capital invested. These facts go far towards accounting for the enormous proportion of accidents and losses which occur upon our rivers. A few instances, in which large profits were realised, induced a great number of individuals to embark in this business, and the tonnage has always been greater than the trade demanded. The accidents, which are almost wholly the result of bad management, were set down as among the unavoidable chances of the navigation, and instead of adopting measures to prevent them, they were deliberately subtracted from the supposed profits, as matters of course. As the boat was not expected to last more than four or five years, at best, and would probably be burnt, blown up, or sunk within that period, it was considered good economy to reduce the expenditures, and to make money by any means, during the brief existence of the vessel. Boats were hastily and slightly built, furnished with cheap engines, and placed under the charge of wholly incompetent persons; the most inexcusable devices were resorted to, to get freight and passengers, and the most criminal indifference to the safety of the boat and those on board, observable during the trip.

The writer was once hurried from Louisville to Shippingsport, two miles below, without his breakfast, and in the rain, to get on board a boat which was advertised to start at eight o'clock on that morning. During the whole day, passengers continued to come on board, puffing and blowing,—in the most eager haste to secure a passage—each having been assured by the captain or agent, that the boat would start in *less than an hour*. The next day presented the same scene : the rain continued to fall ; we were two miles from the city, lying against a miry bank which prevented any one from leaving the boat,—the fires were burning, the steam hissing, and the boat *only waiting for the captain*, who would be on board in a few minutes. Bye and bye the captain came—but then we must wait a few minutes for the clerk, and when the clerk came, the captain found that he must go up to town. In the mean while passengers continued to accumulate, each decoyed alike by the assurance that the boat was about to depart. Thus we were detained until the *third day*, when the cabin and deck being crowded with a collection nearly as miscellaneous as the crew of Noah's ark, the captain thought proper to proceed on his voyage. It was afterwards understood that when the captain began to collect passengers, a part of his engine was on shore, undergoing repairs which could not be completed in less than two days, yet during the whole of those two days, were the fires kept up, and gentlemen and ladies inveigled on board, in the manner related.

We mention this to shew the kind of deceptions which have been practiced. This, it is true, was an extreme case, but although the detention is not usually so great, nor the deceit so gross, it is not uncommon for steamboat captains and agents, to deceive passengers by the most egregious misrepresentations.

The fact is important, not merely as shewing the inconveniences to which travelers are exposed, but as explaining one of the causes of the numerous accidents on the western waters—which is, *bad faith*. The man who will do one dishonest act, will do another. The agent or officer, who will deliberately kidnap men, by the assurance that he will start to-day, when he knows that he will not start until to morrow, and the owner who will permit such conduct, will not shrink at any act by which he may think his interest likely to be promoted—and having insured the boat, will risk the lives of the passengers, by running at improper seasons, and other hazards, by which time may be saved, and the expenses of the trip diminished.

The danger of injury to boats from snags, has now become greatly diminished in the Mississippi, and has almost entirely ceased in the Ohio, in consequence of the measures adopted for the removal of those obstacles.

The burning of boats must be the result of carelessness; and the dreadful consequences arising from collision, are produced by negligence and by design. There is scarcely a conceivable case in which boats may not avoid running against each other in the night; and there are many instances in which the officers of steamboats have been induced by a ferocious spirit of rivalry, or some other unworthy motive, to run against weaker boats in such a manner as to sink them instantly.

It is proper however to state, that the accidents occuring on steamboats, have been greatly magnified by premature and inaccurate newspaper reports, and that they have been much fewer and less fatal than has generally been supposed.

It is also true, that much of the evil alluded to is attributable to the precipitancy and culpable negligence with regard to their own safety and comfort of the passengers. The accidents are almost wholly confined to insufficient or badly managed boats, and the traveler who would be cautious in embarking only in those of the more respectable class would almost uniformly ensure himself against danger. A choice of boats, embracing every variety, from the best, to those which are wholly unseaworthy, is presented at all our principal places of embarkation. Yet such is the feverish impatience of delay, evinced by most travelers in our country, that the great majority hasten on board the first boat which offers, regardless of her character, and only anxious to be moving forward, under any discomfort, and at every hazard. The bad boats receive undue patronage, the best do not meet the preference to which they are entitled, and are not compensated for the extra expenditure bestowed upon their outfit and management; and the inducements to accommodate the public well being weakened, neither the owners nor officers of steamboats feel the same solicitude for the reputation of their boats, nor the same degree of responsibility, which would occur if the public patronage was more judiciously bestowed.

The following remarks occur in a letter to the secretary of the treasury, from Mr. William C. Redfield, agent of the steam navigation company at New York, and are considered as embracing the steam navigation of the whole union:

" The contests for speed, or practice of racing, between rival steamboats, has been the cause, and perhaps justly, of considerable alarm in the community. It is remarkable, however, that as far as the information of the writer extends, there has no accident occurred to any boiler which can be charged to a contest of this sort. The close and uniform attention which is necessarily given to the action and state of the boilers and engines, in such contests, may have had a tendency to prevent disaster. But this hazard, as well as the general danger of generating an excess of steam, is greatly lessened by the known fact, that in most steamboats the furnaces and boilers are not competent to furnish a greater supply of steam than can be used with safety, with an ordinary degree of attention on the part of the engineers.

"The magnitude and extent of the danger to which passengers in steamboats are exposed, though sufficiently appalling, is comparatively much less than in other modes of transit with which the public have been long familiar; the accidents of which, if not so astounding, are almost of every day occurrence. It will be understood that I allude to the dangers of ordinary navigation, and land conveyance by animal power on wheel carriages. In the former case, the whole or greater part of both passengers and crew are frequently lost, and sometimes by the culpable ignorance or folly of the officers in charge, while no one thinks of urging a legislative remedy for this too common catastrophe. In the latter class of cases, should inquiry be made for the number of casualties occurring in various districts in a given number of years, and the results fairly applied to our whole population and travel, the comparatively small number injured or destroyed in steamboats would be matter of great surprise to those not accustomed to make such estimates upon passing events. It is also worthy of notice, that if the average annual loss of life by the electric stroke were ascertained in the manner above proposed, the results would probably show a loss of life by this rare casualty far exceeding that which is occasioned by accidents in steamboats."

We extract from an interesting report of a committee of the House of Representatives, in congress, made in 1832, by Mr. Wickliffe of Kentucky, the following tabular statement of the steamboat accidents in the United States previous to that date.

LIST of Steamboat Explosions which have occurred in the United States, (with remarks thereon,) by W. C. Redfield.

When explo.	Names.	Place of Explosion.	Killed, &c.	Wounded.
	High Pressure.			
1817,	Constitution,	Mississippi,	13 killed.	
"	General Robinson,	do.	9	
"	Yankee,	do.	4	
"	Heriot,	do.	1	
1824,	Etna,	New York bay,	13	
1828,	Grampus,	Mississippi,	unknown	
"	Barnet,	Long Island Sound,	1 killed	
1830,	Helen McGregor,	Mississippi,	33	14 wounded
"	Caledonia,	do.	11	11
"	Car of Commerce,	Ohio river,	28	29
"	Huntress,	Mississippi,	unknown	
"	Fair Star,	Alabama,	2 killed	
"	Porpoise,	Mississippi,	unknown	
			115	54
	Low Pressure.			
Pre. to 1825,	Enterprise, cop. boiler	Charleston, S. C.	9 killed	4 wounded
"	Paragon, do.	Hudson river,	1	1
"	Alabama,	Mississippi,	4	
"	Feliciana,	do.	2	
"	Arkansas,	Red river,	4	
"	Fidelity, cop. boiler	New York harbor	2	
"	Patent, do.	do.	5	2
"	Atlanta, do.	do.	2	
"	Bellona, do.	do.	2	
"	Maid of Orleans, do.	Savannah river,	6	
"	Raritan, unknown	Raritan,	1	
"	Eagle, do.	Chesapeake,	2	several
"	Bristol,	Delaware river,	–	1
"	Powhatan, cop. boiler	Norfolk,	2	
1824,	Jersey, do.	Jersey city,	2	
1825,	Tesch,	Mississippi,	several	
"	Constitution,	Hudson river,	3	
"	Legislator,	New York harbor,	5	2
1826,	Hudson,	East river,	–	1
"	Franklin,	Hudson river,	1	
"	Ramapo, in Jan.	New Orleans,	5	2
"	Do. in Mar.	do.	1	1
1827,	Oliver Ellsworth,	Long Island Sound,	3	
1830,	Carolina,	New York harbor,	1	
"	Ch. J. Marshall, cop. boiler	Hudson river,	11	2
"	United States,	East river,	9	
1831,	General Jackson,	Hudson river,	12 supposed	13
			95	29
	Character of Engines not specified.			
	Cotton Plant,	Mobile,	unknown	unknown
1816,	Washington, (high p.)	Ohio river,	7	9 wounded
1826,	Macon,	South Carolina,	4	
1827,	Hornet, (low)	Alabama,	2	2
1826,	Susquehannah,	Susquehannah,	2	
1827,	Union, (high)	Ohio river,	4	7
1830,	Wm. Peacock, stovepipe	Buffalo,	15	
"	Tally-ho, (high)	Cumberland river,		
"	Kenhawa, (low)	Ohio river,	8	4
"	Atlas,	Mississippi,	1	
"	Andrew Jackson,	Savannah river,	2	
1831,	Tri-color, (low)	Ohio river,	8	8
			46	21

RECAPITULATION.

		Killed.	Wounded.
13	High pressure accidents, - - -	115	54
27	Low pressure do. - - - - -	95	29
12	Character of engines unknown, supposed to be chiefly high pressure, - -	46	21
52	Total,	256	104

"In some of the principal accidents comprised in the foregoing list, the number of killed includes all who did not recover from their wounds. In other cases, the numbers killed are as given in the newspapers of the day, and some of the wounded should perhaps be added. In some few instances no list has been obtained, and possibly in some no loss of life has occurred. The accounts of some of the minor accidents may have been lost sight of or overlooked in my files. *In making an approximate estimate of the whole number of lives which have been lost in the United States by these accidents, I should fix it three hundred.*

"Although this is a melancholy detail of casualties, yet it seems less formidable when placed in comparison with the ordinary causes of mortality, and especially when contrasted with the insatiate demands of intemperance and ambition. It is believed that it will appear small when compared with the whole amount of injury and loss which has been sustained by traveling in stages and other kinds of carriages. More lives have probably been lost from sloops and packets on the waters of this state since the introduction of steamboats, than by all the accidents in the latter, though the number of passengers exposed has been much smaller. In one case that occurred within a few years, thirty-six persons were drowned on board a sloop in the Hudson river, and many instances, involving the loss of a smaller number of lives; and one case occurred not long since, on Long Island sound, which resulted in the loss of twelve or fourteen individuals.

"It will be seen by reference to the foregoing list, that, of twenty-five lives that have been lost on board of New York steamboats previous to the case of the Chief Justice Marshall, and excluding the case of the Etna, only *one passenger* is included in the number. Even in the more fatal cases which are here excluded, and in all accidents of this nature, the chief loss is sustained by the crew and officers attached to the boats, who, by the nature of their employments, are compelled to encounter by far the greatest portion of the hazard.

In the year 1832 it was estimated, that besides the steamboats, there were 4,000 flat boats annually descending the Mississippi, whose aggregate measure would be 160,000 tons. As these do not return, the loss on them would amount to $420,000, and the expense of loading, navigating and unloading them $960,000—making the whole annual expenditure upon this class of boats $1,380,000.

In the same year the aggregate cost of steamboats, the expenses of running them, interest, wear and tear, wood, wages, and subsistence of crews and passengers was estimated at $5,906,000.

The total expenditure on steam and flat boats was, according to this calculation $7,286,000.

The value of the produce exported in these boats, together with the labor expended in and about them was estimated at $26,000,000.

The different descriptions of boats navigated on the western rivers, in that year, were supposed to give employment to 16,900 men, namely:

To mechanics and laborers employed in building 20 steamboats, and repairing others, - -	$1,700
Wood cutters, - - - - - - - -	4,400
Crews of steamboats, - - - - - - -	4,800
Building flat boats, - - - - - - -	2,000
Navigating flat boats to New Orleans, - - -	4,000
	$16,900

But adding to those who are directly engaged, the much larger number who are indirectly employed in making engines, and in furnishing, supplying, loading and discharging boats, the whole number of persons deriving subsistence from this navigation in 1832, was supposed to be 90,000. That number has since been greatly increased. During the last season there was built at Pittsburgh and the neighboring towns about 25 steamboats, at Cincinnati and its neighborhood about 25.

From 1822 to 1827 the loss of property on the Ohio and Mississippi, by snags, including steam and flat boats, and their cargoes, amounted to $1,362,500. Loss in the same items from the same cause, from 1827 to 1832, $381,000.

We close this part of our subject, with the following extracts from two very interesting articles published in the Wheeling Gazette, since our table of steam boats was compiled.

"We are informed on good authority that the number of boats built the present year between Louisville and Pittsburgh, including those places, will not fall short of 50. About 35 of these are for distant parts of the country—for the southern and westernmost States: the remaining 15 will be added to our river trade, increasing the number of boats thus employed to about 60. Supposing the amount of freight conveyed in each boat to be 40 tons down and 20 up, some opinion may be formed of the amount of merchandise transported yearly upon the Ohio. The river may be estimated to be navigable from six to eight months in the year, and each boat to perform twelve trips from Wheeling to Louisville and back. Each boat, then, transports 12 times 40 tons down, and half this quantity up, equal to 720 tons. This multiplied by 60, the number of boats, gives 43,200 tons as the gross amount of merchandise transported yearly in steamboats upon the Ohio.

To fix the value of this merchandise is not so easy. Yet something like accuracy may be obtained. It is said that a wagon load of dry goods, weighing 2 tons, will cost about 4,000 dollars, and that western merchants who purchase 8,000 dollars' worth receive them generally in two wagon loads. This would make a ton of dry goods worth 2,000 dollars. As grosser and heavier articles, however, are sent down the river in large quantities, the value per ton may be rated at 500 dollars. Forty times 500 give 20,000 dollars as the value of each cargo; this, multiplied by 12, gives 240,000 as the amount conveyed by each boat during the season; and this multiplied by 60, the number of boats, gives the sum of 14,800,000 dollars as the value of the down freight in a single year. This is independently of the merchandise conveyed in keel and flat boats, and the immense amount of lumber which almost covers the face of the river in the spring season. The value of the merchandise transported up the river may be estimated at about 1,500,000 dollars. Making the total value of merchandise transported in steamboats yearly on the Ohio, upwards of sixteen millions of dollars.

The following table shows the distances from each other of the places named, and from Wheeling, with the prices of passage. It is proper to observe that these are established rates, but that some boats charge less, the prices depending, in some degree, upon the number of boats in port, and the abundance or scarcity of passengers.

UP THE RIVER.	M	M	$	c
Wheeling to Wellsburgh, Ohio,	16			75
Steubenville, Ohio,	7	23	1	00
Wellsville, do	20	43	1	50
Beaver, Pennsylvania,	26	69	2	50
Pittsburgh, do	27	96	3	00
DOWN THE RIVER.				
Marietta, Ohio,	82		2	50
Parkersburgh, Va.	10	92	2	50
Point Pleasant, do	78	170	5	00
Galliapolis, Ohio,	3	173	5	00
Guyandotte, Virginia,	37	210	6	00
Portsmouth, Ohio,	50	260	7	00

DOWN THE RIVER.	M	M	$	c
Maysville, Kentucky,	42	307	8	00
Ripley, Ohio,	12	319	9	00
Cincinnati,	46	355	10	00
Port William, mouth of Kentucky,	79	434	11	00
Madison, Indiana,	13	447	11	00
Westport, Kentucky,	20	467	12	00
Louisville,	20	487	12	00
Rome, Indiana,	100	587	15	00
Troy,	35	622	15	00
Yellow Banks, Kentucky,	25	647	15	00
Evansville, Indiana,	40	687	18	00
Henderson, Kentucky,	12	699	18	00
Shawnetown, Illinois,	53	752	18	00
Smithland, mouth of Cumberland,	63	815	18	00
Mouth of Ohio,	66	881	20	00
New Madrid, Mo.	75	956	22	00
Memphis, Tenn.	150	1106	25	00
Helena, Arkansas Ter.	85	1191	26	00
Vicksburgh, Miss.,	307	1498	30	00
Natchez,	110	1608	30	00
New Orleans, La.	300	1908	35	00

The above prices of passage, include boarding. The prices of deck passage, are about one-fourth of these, the passengers finding themselves. Thus to Louisville the deck passage is 3 dollars, cabin 12; to N. Orleans, deck, 8, cabin 35. The deck is covered and contains berths, but it is a very undesirable way of travelling. The passage to Louisville is generally performed in 2½ days, and to New Orleans from 8 to 10; returning nearly double this time. The ordinary speed of the boats is 12 miles an hour down the river, and 6 up.

Where large parties apply together for passage or where emigrating families apply, a considerable reduction is often made. We will mention the case of a family from Maryland, who took passage on the 27th inst, as one in point, and as furnishing emigrants with some information they may like to hear. The family consisted of 15 persons, (9 adults and 6 children,) 5 of whom were slaves. There were also three horses, a wagon, and a wagon load of baggage. They wished a passage to St.

Louis, and on making application to the master of the only boat in port on their arrival here, were told that the fare would be $20 for each adult in the cabin, 6 for deck passage, 15 for each horse, (the owner finding them,) and the usual rates of freight for the baggage; or, to lump the whole, $250. Rather than pay this, the head of the family preferred waiting awhile; he did so, and in three days effected a bargain for $160 for the family, embracing 6 cabin passengers, (with servant,) and 8 deck do., together with three horses, wagon and baggage; the deck passengers and horses to be found by the emigrant.

It may not be irrelevant to add that the family spoken of had come from a county in Maryland about 300 miles from Wheeling. They travelled about 20 miles a day with a four horse wagon. Their expenses thus far was $75 dollars; price of oats on the road 45 to 50 cents.—Had they continued on by land to St. Louis, 600 miles from here, it would have cost them 100 dollars more.—They would have got oats in Ohio for 20 and 25 cents, and Indiana and Illinois for 16 and 18. It would have taken them 30 days, however; while by water they will reach there in 7.

ALPHABETICAL LIST of Steamboats built and running on the western waters, with the date of building, tonnage, and expiration of service. The high *and* low *pressure engines are distinguished by the letters* h *or* l *in the first column.*

Names.		Where built.	When built.	Tonnage.	Date of loss.	How destroyed.
Ætna,		Pittsburgh,	1814	361	1822	Worn out.
Alabama,		Fort Stephens,	1818	219	1824	Struck St. B. Natchez.
Alexandria,		New Orleans,	1819	60	1823	Struck a drift log.
Arkansas,		do.	1820	51		Snagged.
Allegheny,	h	Pittsburgh,	1818	50	1826	Worn out.
Ariel,	h	Cincinnati,	1825	80		Worn out.
America,	h	Pittsburgh,	1826	240	1827	Sunk.
American,	h	do.	1824	50		Worn out.
Andrew Jackson,		Cincinnati,	1823	209		Worn out.
Aurora,	h	Steubenville,	1825	150		Sunk.
Atalanta,	h	Cincinnati,	1826	148	1834	Worn out.
Amazon,	l	do.	1826	300	1831	Sunk.
Attackapas,	h	Louisville,		124	1831	Burnt at New Orleans.
Atlas,	h	New Albany,	1827	160		
Atlantic,	h	Marietta,	1829	400		
Amulet,	l	Cincinnati,	1829	150		
Allegheny,	h	Pittsburgh	1830	40		
Abeona,	h	do.	1830	150		
Argus,	h	do.	1831	100	1834	Worn out.
Arab,	l	Cincinnati,	1831	150		
Assinaboine,	h	do.	1832	150		
Albion,	h	Brownsville,	1833	40		
Antelope,	h	Pittsburgh,	1831	90	1831	Sunk by ice.
Arkansaw,	h	Cincinnati.	1832	115		
Argo,	h	Jeffersonville,	1833	80		
Andrew Jackson,		Steubenville,	1833	120		
Alert,	h	Pittsburgh,	1835	105		
Alice Maria,	h	Cincinnati,	1835	95		
Alpha,	h	Rising Sun,	1835	58		
Algonquin,		Pittsburgh,	1835	222		
Arabian,		do.	1835	101		
Artist,		Brownsville,	1834	108		
Adriatic,		Cincinnati,	1835	432		
Adventure,		Pittsburgh,	1835	50		
Anna Calhoun,		Wheeling,	1835	138		
Augusta,		Cincinnati,	1835	312		
Beaver,		Louisville,	1829	139		Worn out.
Balise,				300	1826	Burnt.
Buffaloe,		Pittsburgh,	1816	250	1819	Worn out.
Belle Creole	l	Cincinnati,	1823	122	1829	Snagged.
Bolivar,	h	Pittsburgh,	1825	130		Worn out.
Belvidere,	l	Portsmouth,	1825	160	1831	Worn out.
Blakely,				250		
Ben. Franklin,	l	Cincinnati,	1826	165	1833	Abandoned.
Beaver,	l	do.	1826	148	1827	
Baltimore,	h	Pittsburgh,	1828	73		
Beverly Chew,						Name changed to Pilot.
Belfast,	h	Cincinnati,	1829	435		
Brandywine,	h	do.	1828	500	1832	Burnt—Above Memphis.
Banner,	h	Ripley,	1830	90		Changed to Calavar
Balise Packet,		Pittsburgh,	1819	50		
Boston,	h	do.	1831	157		
Bolivar,	h	Grave Creek,	1831	46		
Baltic,	h	Pittsburgh,	1831	407		
Bonita,	h	Cincinnati,	1832	140		
Black Hawk,	h	New Albany,	1832	160		Changed to Heroine.
Bravo,	h	Wheeling,	1832	65		

Names.		Where built.	When Built.	Tons.	Date of loss.	How destroyed.
Barrataria,	h	Cincinnati,	1832	100		
Bonnets of Blue,	h	Cumberland river,	1832	186		
Black Hawk,	h	Cincinnati,	1832	160		
Bayou Sara,	h	do.	1833	275		
Beaver,	h	Beaver,	1833	60		
Boone's Lick,	h	Pittsburgh,	1833	295		
Black Hawk,		Cincinnati,	1832	150		
Bunker Hill,		N. Albany,	1834	301		
Boone,		do.	1834	110		
Missouri Belle,		Elizabethtown	1834	164	1834	Sunk—By St. Boone's Lick.
Ben. Franklin,		Cincinnati,	1834	126		
Big Black,		Pittsburgh,	1835	81		
Comet,	h	Cincinnati,	1817	154	1823	Snagged.
Cincinnati,		Cincinnati,	1818	157		Snagged.
Car of Commerce,	h	Pittsburgh,	1819	[illegible]21	1822	Worn out.
Columbus,	l	New Orleans,	1819	450	1824	Worn out.
Calhoun,	h	Kentucky river	1819	130	1824	Worn out.
Cumberland,	h	Pittsburgh,	1819	246	1825	Worn out.
Columbia,		Cincinnati,	1826	220		Burnt.
Cherokee,	h			125		Burnt.
Congress,		Wheeling,	1822	160		Worn out.
Courier,	l	Louisville,	1820	119		Worn out.
Cotton Plant,				125		Lost at Mobile.
Columbus,	h	Pittsburgh,	1826	220		Sunk.
Caledonia,	h	Cincinnati,	1824	371		
Cavalier,	l	do.	1825	180	1831	Worn out.
Clinton,	l	do.	1825	132	1831	Worn out.
Caravan,	h	do.	1825	220	1830	Worn out.
Columbia,	l	do.	1825	200	1833	Snagged.
Cotton Plant,			1826			
Courtland,		Cincinnati,	1826	212		
Cincinnati,	h	do.	1826	106		
Coosa,	h	Marietta,	1826	173	1831	Sunk by S. B. Huntress.
Commerce,	h	Pittsburgh,	1826	180	1830	Worn out.
Crusader,	l	Fred'ksburgh,	1826	170	1830	Sunk.
Catawba,	h	Silver creek,	1826	170		
Chesapeake,		Big Bone,	1827			Never commenced running.
Cleopatra,	h	New Albany,	1826	150		
Criterion,	h	do.	1828	200		
Cumberland,	h	Pittsburgh,	1828	100	1831	Sunk.
Car of Commerce,	h	West Port,	1827	150	1832	Sunk.
Citizen,	h	Pittsburgh,	1829	120		Sunk.
Constitution,	h	Cincinnati,	1829	300		
Cedar Branch,	h					
Cora,	h	Pittsburgh,	1829	140		
Corsair,	h	do.	18[illegible]	121		
Courier,	h	Cincinnati,	1830	100	1835	Worn out,
Chieftain,	h	New Albany,	1830	120		
Cotton Plant,	h	Cincinnati,	1830	262	1832	Burnt at New Orleans.
Convoy,	h	do.	1830	315		
Cincinnatian,	l	do.	1830	236	1834	Worn out.
Colbert,	h					
Carrolton,	h	Pittsburgh,	1831	186		
Columbus,	h	do.		50		
Charleston,	h	Big Sandy,	1830	80		
Conveyance,	h	Cincinnati,	1831	90		
Companion,	h	Ripley,	1831	100		
Courier,	h	Pittsburgh,	1831	160	1834	Worn out.
Choctaw,	h	do.	1831	136		
Chesapeake,	h	Marietta,	1831	154		

Names.		Where built.	When built.	Tons.	Date of loss.	How destroyed.
Chief Justice Marshall,	*h*	Pittsburgh,	1832	179		
Chattahoochee,	*h*	Cincinnati,	1832	100		
Caroline,	*h*	Pittsburgh,	1828	90	1834	Sunk.
Creole,	*h*	Cumberl'd river	1829	171		Worn out.
Chippewa,	*h*	Steubenville,	1832	140		
Caroline,	*h*	New Albany,	1832	180		
Caspian,	*h*	Cincinnati,	1832	200		
Champlain,	*h*	Augusta,	1832	100	1834	Sunk, below St. Louis.
Chester,	*h*	Pittsburgh,	1832			
Charleston,	*h*	Cincinnati,	1831			
Carolton,	*h*	Beaver,	1830			
Cavalier,	*h*	Ripley,	1832			
Chickasaw,	*h*	Pittsburgh,	1832			
Cayuga,	*h*	do.	1833			
Clinton,	*h*	Wheeling,	182[illegible]			Worn out.
Chancellor,	*h*	Shausetown,	1832			
Compromise,	*h*	Louisville,	1832			
Champion,	*h*	Bridgeport,	1833			
Carol,	*h*	Portsmouth,	1832			
Ceres,	*h*	Brownsville,	1833			
Citizen,	*h*	Richmond,	1833		1834	Sunk.
Caledonia,	*h*	Ripley,	1833			
Choctaw,	-	Pittsburgh,	1833	120		
Consort,	*h*	Brownsville,	1832	130	1832	Sunk.
Courtland,	*h*	Cincinnati,	1826	200	1833	Sunk.
Cumberland,	*h*	Pittsburgh,	1827	120		Worn out.
Commerce,	*h*	do.	1834	170		
Cygnet,	*h*	Cincinnati,	1834	77		
Chickasaw,	*h*	do.	1834	152		
Claiborne,	*h*	Pittsburgh,	1834	327		
Despatch,	-	Brownsville,	1817	75	1820	Worn out.
Dolphin,	*h*	Pittsburgh,	1819	146	1834	Worn out.
De Witt Clinton,	*h*	do.	1826	200	1830	Worn out.
Decatur,	*h*	Brownsville,	1826	113		Sunk.
Diana,	*h*	Brush Creek,	1828	100	1833	Sunk.
Delaware,	*h*	Pittsburgh,	1828	100	1832	Sunk—raised—abandoned.
Dolphin,	*h*	Aurora,	1826	90		Destroyed.
Don Juan,	*l*	Louisville,	1831	100		
Dolphin,	*h*	Portsmouth,	1830	112	1832	Burnt, below Wheeling.
Dove,	*h*	Pittsburgh,	1831	100		
Dan'l Webster,	*h*	Cincinnati,	1829	80	1834	Worn out.
Delphine,	*h*	do.	1832	137	1833	Burnt.
Dover,	*h*	Cumberland R.	1832	200		
Dan'l O'Connell,	*h*	New Albany,	1833	200		
Daniel Boone,		do.	1826	264	1832	Sunk—Canadian Reach, Miss.
Don Pedro,						Changed to Leonidas
Denmark,		Wheeling,	1834	75		
Despatch,		Pittsburgh,	1832	338		
Detroit,		do.	1835	137		
Dover,		do.	1835	80		
Daniel Webster,		Jeffersonville,	1835	389		
Dayton,		Pittsburgh,	1835	118		
Enterprise,		Brownsville,	1814	75	1817	Worn out.
Exchange,		Louisville,	1818	214	1824	Worn out.
Elizabeth,		do.	1817	243		Worn out.
Expedition,		Pittsburgh,	1818	120		
Expedition,		Wheeling,	1819	235	1824	Worn out.
Eagle,		Cincinnati,	1818	118		Snagged, above New Orleans
Eclipse,	*h*	Pittsburgh,	1823	190		Sunk.
Eliza,	*h*	Cincinnati,	1821	65		Worn out.
Emerald,	*h*	Cumberland R.	1824	150	1830	Worn out.
Echo,	*h*	Pittsburgh,	1826	150		Worn out.

Names.		Where built.	When built.	Tonn.	Date of loss.	How destroyed.
Erie,	h	Pittsburgh,	1826	125		Worn out.
Essex,	h	do.	1827	135	1829	Broke in two, on Gr. Chain.
Emigrant,	h	Cincinnati,	1829	76	1832	Sunk by ice.
Experiment,	h	Brownsville,	1830	85		
Enterprise,	h	Pittsburgh,	1830	150		
Eagle,	h	do.	1830	40		
Express,	h	Cincinnati,	1831	105		
Exchange,	h	Louisville,	1830	32		Abandoned.
Enterprise,	h	Shousetown,	1830	111	1832	Snagged.
Envoy,	h	Cincinnati,	1831	95		
Elk,	h	Brownsville,	1829	60	1833	Abandoned.
Emigrant,	h	Cincinnati,	1832	90	1832	Lost by ice.
Erin,	h	Covington,	1833	100		
Erie,	h	Brownsville,	1827	52		Worn out.
Eclipse,	h	Marietta,	1832	60		
Ellen Douglass,	h	New Albany,	1833	206		
Exchange,		Cookstown,	1835	68		
Franklin,		Pittsburgh,	1817	150	1822	Snagged, near St. Genevieve.
Frankfort,		Kentucky R.	1818	250	1822	Worn out.
Fayette,	h	Louisville,	1819	314		Worn out.
Fidelity,	l	New York,	1821	150		Destroyed.
Florence,		Clarkesville,	1822	60		Destroyed.
Fire Fly,		Louisville,		19		Destroyed.
Florida,	l	Pittsburgh,	1826	278		Destroyed.
Fort Adams,				125		Burnt.
Florida,	l	Cincinnati,	1826	250		Burnt, on Mobile river.
Feliciana,	h	Philadelphia,	1820	402		Still running.
Favorite,	h	Pittsburgh	1822	260		Worn out.
Florence,	h	Silver Creek,	1822	60		Worn out.
Fanny,	l	New York,	1823	130	1827	Went back to N. York.
Friendship,	h	Pittsburgh,	1825	200		Worn out.
Fame,	h	do.	1826	170	1830	Worn out.
Facility,	l	Cincinnati,	1827	117		Worn out.
Fairy,	l	do.	1827	80	1831	Sunk.
Forrester,	h	Brownsville,	1827	100	1833	Burnt, on Cumberland.
Farmer,	l	Cincinnati,	1831	277		
Freedom,	h	Wheeling,	1831	135		
Favorite,	h	Nashville,	1831	155	1832	Sunk, robbed, and burnt.
Friend,	h	Cincinnati,	1831	118		
Falcon.	h	do.	1832	91	1833	Sunk by S. B. Senator.
Fairy Queen,	h	Brush Creek.	1832	66		
Friendship,	h	Cincinnati,	1833	100		
Free Trader,	h	Pittsburgh,	1832	109		
Fame,	h	do.	1832	132		
Farmer,	h	do.	1833	277		
Flora,	h	do.	1835	119		
Geo. Madison,	h	do.	1811	150	1822	Worn out.
Gen. Jackson,	h	do.	1817	150	1822	Snagged, on Cumberland.
Gen. Pike.	h	Cincinnati,	1818	180	1823	Worn out.
Gen. Clarke,	h	Louisville,	1818	200	1822	Worn out.
Gov. Shelby.	l	do.	1819	106	1822	Worn out.
Gen. Harrison,		do.	1819		1823	Destroyed.
Gen. Greene,	l	Cincinnati,	1820	306	1823	Snagged, on Cumberland.
Gen. Robinson,	h	Newport,	1819	232	1823	Snagged, near New Madrid.
Grecian,	h	Louisville,	1824	160	1826	Burnt at New Orleans.
Gen. Pike,	h	Big Bone,	1824	150		Worn out.
Geo. Washington,	h	Cincinnati,	1825	360		
Gen. Brown,	h	Pittsburgh,	1825	180		Burnt at Mobile.
Gen. Scott.	h	Beaver,	1825	220		
Gen. Wayne,	h	Pittsburgh,	1825	350	1829	Worn out.
Gen. Carroll,	h	Cincinnati,	1826	272	1829	Sunk by S. B. Diana.
Gen. Hamilton,	h	do.	1826	158	1829	Worn out.

Names.		Where built.	When built.	Tons.	Date of loss.	How destroyed.
Gen. Marion,	h	Cincinnati,	1826	88		
Gen. Coffee,	h	Pittsburgh,	1826	200		
Galena & St. Louis Packet,	h	New Albany,	1826	150		Worn out.
Grampus,	h	Cincinnati,	1827	290		
Galena,	h	do.	1829	110		Changed to Hawk Eye.
Globe,	h	St. Louis,	1829	150		Abandoned, up the Mississippi.
Gen. Neville,	h	Pittsburgh,	1822	150		Worn out.
Gondola,	h	do.	1830	120	1832	
Gleaner,	h	do.	1830	100		Sunk by unloading.
Guyandot,	h	Cincinnati,	1831	91		
Gondolier,	h	Nashville,	1831	110		Changed to Rambler.
Gallipolis,	h	Gallipolis,	1832	100		
Gazelle,	h	Pittsburgh,	1832	130		
Grenadier,	h	Bridgeport,	1832	150		
Galenian,		Pittsburgh,	1834	130		
Gladiator,		Cincinnati,	1834	120		
General Pike,		do.	1835	151		Mail boat.
General Sumpter,		do.	1835	188		
Gov. Clarke,		Louisville,	1835	149		
George Collier,						
Hecla,		Cincinnati,	1818	120	1823	Worn out.
Henderson,		do.	1818	124	1823	Worn out.
Hero,		Steubenville,	1819	120	1822	Struck a rock near Golconda—sunk.
Henry Clay,	l	Licking river,	1819	150	1826	Destroyed, on Mobile river.
Hornet,		Brandenburg,	1820	118		Lost at Mobile.
Hope,		Louisville,	1821	75	1825	Sunk, near Bayou Sara.
Hercules,	h	Cincinnati,	1826	275	1828	Sunk.
Highl'd Laddie,	h	do.	1824	80		Destroyed.
Herald,	h	Pittsburgh,	1824	150		Destroyed.
Helen M'Gregor,	h	Cincinnati,	1825	340	1831	Destroyed at Mobile.
Hercules,	h	Pittsburgh,	1826	165	1831	Worn out.
Hibernia,	h	New Albany,	1825	200	1834	Worn out.
Huntress,	h	do.	1826	300		
Huntsville,	h	Pittsburgh,	1829	350		
Huron,	h	do.	1829	230		Snagged, above Natchez.
Home,	h	do.	1829	120	1831	Burnt, at Beaver.
Huntsman,	h	do.	1829	150		
Highlander,	h	Brownsville,	1829	120		
Herald.	h	Marietta,	1829	120		
Hope,	h	Zanesville,	1828	60		
Hudson,	h	Pittsburgh,	1829	346		
Hatchie,	h	do.	1830	100		
Herald,	h	do.	1831	200	1835	Worn out.
Harry Hill,	h	Cumberl'd river	1832	161		
Homer,	h	New Albany,	1832	500		
Halcyon,	h	Brownsville,	1832	121		
Helen Mar,	h	Cincinnati,	1832	80		
Henry Clay,	h	Pittsburgh,	1831	425		
Hawk Eye,	h	Cincinnati,	1829	120		Formerly the Galena.
Heroine,	h	Bridgeport,	1832	96		
Heroine,	h	New Albany,	1832	160		
Huntsville,	h	Shawneetown,	1829	330		
Huntress,	h	Pittsburgh,	1834	97		
Hunter,	h	do.	1834	110		
Independence,		do.	1818	50		
Independence,		Salt river,	1818	100	1821	Worn out.
Indiana,	h	New Albany,	1822	180	1829	Worn out.
Illinois,	h	Pittsburgh,	1826	130	1828	Snagged.
Integrity,	h	Cincinnati,	1827	100		
Isabella,	h	Marietta,	1827	250		
Industry,	h	Pittsburgh,	1829	80		Name changed to Elk
Illinois,	h	Jeffersonville,	1831	110		

Names.		Where built.	When built.	Tons.	Date of loss.	How destroyed.
Ivanhoe,		Pittsburgh,	1834	197		
Iodian,		Cincinnati,	1834	70		
Indiana,		do.	1834	70		
Iowa,		Elizabethtown,	1834	144		
Iberia,		Cincinnati,	1834	156		
James Monroe,	h	Pittsburgh,	1816	150	1821	Sunk, below Red River.
Johnston,	h	Wheeling,	1818	140	1822	Worn out.
James Ross,	h	Pittsburgh,	1818	270	1823	Stove by ice, at St. Louis
Jubilee,	h	do.	1826	205		Worn out.
Josephine,	h	Cincinnati,	1826	50		Worn out.
James O'Hara,	h	Pittsburgh,	1828	200		
July 4th,	h	New Albany,	1831	100	1831	Sunk, above Wheeling.
Juniata,	h	Pittsburgh,	1832	118		
Junius,	h	Elizabethtown,	1832	129		
Jefferson,	h	Wheeling,	1832	156		
Jefferson,	h	Nashville,	1832	100	1834	Sunk.
Java,	h	Marietta,	1830	103		
James Monroe,	h	Cincinnati,	1831	170		
John Nelson,	h	Pittsburgh,	1833	156		
Jack Downing,	h	Gallipolis,	1833	123		
Josephine,	h	Marietta,	1834	90	1834	Sunk, below St. Louis
John Hancock,		Brush Creek.	1835	95		
Kentucky,		Kentucky river	1818	112	1821	Worn out.
Kanawha,	h	Cincinnati,	1828	60		Sunk.
Kentuckian,	h	Pittsburgh,	1829	255		
Knoxville,	h	Cincinnati,	1831	120		
Kitty Clover,	h	Wheeling,	1829	60		Abandoned.
Kentuckian,		Pittsburgh	1829	331		
Leopard,		Louisville,	1830	60	1825	Snagged, near Point Chacot
Louisiana,	l	New Orleans,	1818	103		Worn out.
La Fayette,	h	Pittsburgh,	1825	150		Worn out.
Liberator,	h	do.	1826	200		Worn out.
Louisville,	h	Louisville,	1823	[illegible]	1827	Worn out.
Laurence,	h	Cincinnati,	1824	122	1829	Worn out.
Lexington,	h	Frankfort,	1825	250	1834	Worn out.
Liberator,	h	Pittsburgh,	1826	200		Worn out.
Lady Washington,	h	do.	1826	147	1832	Sunk by ice.
Lady of the Lake,	h	New Albany,	1826	170	1832	Snagged, at Wolf Island.
Lady Washington,	h	Silver Creek,	1826	360	1832	Lost by ice.
Livingston,	h	Smithland,	1826	200		Worn out.
La Grange,	h	Wheeling,	1828	135	1832	Abandoned.
Lady La Fayette,				65		
Lady Franklin,	h	Portsmouth,	1829	200	1835	Sunk by collision.
La Fourche,	h	New Albany,	1829	200		
Lark,	h	Pittsburgh,		100		Name changed to Uncas.
Louisiana,	h	Cincinnati,	1830	307		
Laurel,	h					
Lady Byron,	h	Steubenville,	1830	100	1832	
Louisville,	h	Pittsburgh,	1831	327	1833	Lost, striking a stump.
Lioness,	h	New Albany,	1832	175		Lost, by an explosion of powder
Little Rock,	h	Jeffersonville,	1832	100		
Lady Madison,	h	Bridgeport,	1832	130		
Lady Jackson,	h	Nashville,	1832	120		
Lady Washington,	h	Marietta,	1832	100		
Lancaster,	h	near Pittsb'gh,	1832	135		
La Fayette,	h	Cincinnati,	1833	84	1833	Burnt, mouth of Ohio.
Leonidas,	h	do.	1833	125		
Logan,		do.	1834	85		
Le Flore,		do.	1834	115		

Names.		Where built.	When built.	Tons.	Date of loss.	How destroyed.
Lady Boone,		Wheeling,	1834	40		
Lady Scott,		Maysville,	1834	70		
Lady Marshall,		Cincinnati,	1834	190		
Lewis Cass,		do.	1835	192		
Levant,		do.	1835	268		
Maid of Orleans	l	Philadelphia,	1818	193		Destroyed.
Maysville,	h	Maysville,	1818	209	1824	Worn out.
Manhattan,	l	New York,	1819	427	1825	Worn out.
Mississippi,	l	Mobile,	1819	380	1825	Worn out.
Mandan,		Louisville,	1819	150	1825	Snagged, above New Orleans
Missouri,	h	Newport,	1819	177	1826	Snagged.
Mars,	h	Wheeling,	1819	55	1822	Snagged, above New Orleans.
Missouri Packet,		Louisville,	1819	60	1820	Snagged, on the Missouri.
Mobile,		New Orleans,	1820	145		
Magnet,	l	Louisville,	1822	140	1827	Worn out.
Miami,	h	Cincinnati,	1822	100	1828	Sunk.
Mechanic,	h	Marietta,	1823	120	1827	Stove, near St. Louis.
Mexico,	h	Cincinnati,	1823	120	1827	Worn out.
Muskingum,	h	Marietta,	1825	150	1829	Snagged, on Red River.
Montezuma,	l	Cincinnati,	1827	200	1829	Snagged, near Helena.
Marietta,	h	Marietta,	1825	150		
Messenger,	h	Pittsburgh,	1826	160	1830	Worn out.
Maryland,	h	do.	1827	160		
Monongahela,	h	Brownsville,	1827	100		Name changed to Forester
Missouri,	h	Pittsburgh,	1828	150		
Mountaineer,	h	Brownsville,	1825	175	1832	Abandoned.
Montgomery,	l	Cumberl'd river	1828	140	1829	Sunk.
Mohican,	h	Pittsburgh,	1829	350		
Monticello,	h	do.	1829	140	1833	Sunk, in Bayou Plaquemine.
Magnolia,	l	Cincinnati,	1830	100		
Minerva,	h		1830			
Mobile,	h	Pittsburgh,	1830	150	1831	Burnt.
Mercury,	h	Steubenville,	1819	15		Struck by S. B. Pittsburgh
Messenger,	h	Ripley,	1831	100		
Memphis,	h	Nashville,	1831	380		
Michigan.	h	Beaver,	1831	338		
Mohawk,	h	Pittsburgh,	1831	555		
Mount Vernon,	h	Cincinnati,	1832	90		
Metamora,	h	Louisville,	1832			
Mediterranean,	h	Pittsburgh,	1832	600		Largest boat.
Missourian,	h	do.	1832	215	1832	Cabin burnt off.
Mobile Farmer,	h	Pittsburgh,	1832	214		
Mountaineer,	h	Bridgeport,	1832	188		
Miner,	h	Pittsburgh,	1833	70		
Madison,	h	Wheeling,	1828	50		
Majestic,		Pittsburgh,	1834	323		
Missouri Belle,		Elizabethtown,	1834	164		
Mogul,		Pittsburgh,	1834	414		
Minerva,		do.	1834	87		
Marion,		Fredonia,	1835	140		
Mazeppa,		Louisville,	1834	135		
Monroe,		Wheeling,	1835	90		
Mount Pleasant,		do.	1835	94		
Madison,		Pittsburgh,	1835	322		
Marion,		do.	1835	100		
Natchez,						
New Orleans,		Pittsburgh,	1815	350	1818	Sunk near Baton Rouge.
Napoleon,		Louisville,	1817	316	1822	Worn out.
Nashville,		Cincinnati,	1822	200	1826	Snagged, above New Orleans.
Nashville Packet,		do.	1827	125	1831	Worn out.
Natchitoches,		do.	1826			Worn out.
Neptune,		New Orleans,	1821	50		Worn out.

Names.		Where built.	When built.	Tonn.	Date of loss.	How destroyed.
Natchez,	*l*	New York,	1822	240	1829	Snagged, below Natchez.
New-York,	*h*	Pittsburgh,	1826	310	1832	Snagged, near Plumb Point.
Native,	*l*	Cincinnati,	1827	100		Snagged.
Neptune,	*h*	Pittsburgh,	1828	200		Snagged, mouth of the Ohio.
North America,	*h*	do.	1828	300		Abandoned.
Nashville,	*h*	Cincinnati,	1828	398		
Niagara,	*h*	Steubenville,	1829	150		
Nile,	*h*	Pittsburgh,	1829	130		
New-Jersey,	*h*	do.	1830	150	1832	Sunk by ice.
New-Pennsylvania,	*h*	do.	1827	140		
Napoleon,	*h*	do.	1831	160		
North Alabama,	*h*	Cincinnati,	1831	365		
New Brunswick,	*h*	Pittsburgh,	1832	200	1833	Burnt, above Vicksburg.
Nimrod,	*h*		1832			
Navarino,	*h*	Gallipolis,	1832	147		
Neptune,	*h*	Jeffersonville,	1832	140		
New Emigrant,	*h*	Cincinnati,	1832	90		
Native,		Bridgeport,	1834	52		
New Companion,		Brownsville,	1834	134		
Navigator,		Bridgeport,	1834	85		
New-York,		Cincinnati,	1835	134		
Neosho,		do.	1834	66		
Orleans,		Pittsburgh,	1811	400	1813	Snagged, near Baton Rouge.
Ohio,	*h*	New Albany,	1817	364	1819	Worn out.
Olive Branch,	*h*	Pittsburgh,	1819	313		Worn out.
Osage,		Cincinnati,	1820	149	1823	Sunk.
Ohio,	*h*	Portsmouth,	1824	180	1828	Destroyed.
Opelousas,	*h*	Cincinnati,	1826	133		Worn out.
Ontario,	*h*	Silver Creek,	1826	106		Worn out.
Oregon,	*h*	Marietta,	1827	225	1832	Sunk, at Plumb Point.
Oliver H. Perry,		Cincinnati,	1829	100		Name changed to Dan. Webster.
Ohio,	*h*	Pittsburgh,	1831	298		
Olive,	*h*	do.	1830	100		Changed to Western Virginian
Odd Fellow,	*h*	Elizabethtown,	1830			Changed to Traveler.
Orleans,	*h*	New Albany,	1831	396		
Otto,	*h*	Jeffersonville,	1831	163		
Osage,	*h*	Morgantown.	1832	90		
Orion,	*h*	Marietta,	1832			
Ophelia,	*h*	Cincinnati,	1832	110		
O'Connell,	*h*	Pittsburgh,	1833	107		
Olive Branch,	*h*	Elizabethtown,	1833	76		
Ouachita,	*h*	Cincinnati,	1833	102		
Ohioan,	*h*	Pittsburgh,	1833	104		
Otsego,		Evansville,	1835	95		
Providence,	*l*	Kentucky R.	1818	450	1824	Snagged, above New Orleans.
Post Boy,	*h*	Louisville,	1818	231	1824	Worn out.
Perseverance,		Cincinnati,	1818	50	1820	Burnt, near Madison.
Paragon,	*l*	do.	1819	355	1828	Worn out.
President,	*h*	Pittsburgh,	1824	300		Run ashore, below Louisville.
Phœnix,	*h*	do.	1823	200	1828	Worn out.
Pitts'h. & St. Louis Packet,	*h*	do.	1823	131	1827	Burnt.
Pittsburgh,	*h*	do.	1823	133		Worn out.
Pennsylvania,	*h*	do.	1823	107	1827	Worn out.
Pilot,	*l*	Big Bone,	1825	150		Snagged, below St. Louis.
Paul Pry,	*h*			60		Sunk, on Red River.
Plough Boy,	*h*	Frankfort,	1824	120		
Patriot,	*h*	Cincinnati,	1825	258	1831	Worn out.
Pioneer,	*h*	do.	1825	200	1830	Worn out.
Phœbus,	*h*	do.	1825	80		
Planter,	*l*	do.	1825	130		
Paul Jones,	*h*	Beaver,	1825	300	1831	Worn out.

Names.		Where built.	When built.	Tons.	Date of loss.	How destroyed.
Post Boy,	l	New York,	1825	200		
Pocahontas,	h	Pittsburgh,	1825	200		
Philadelphia,	l	Cincinnati,	1826	445	1834	Worn out.
Pocahontas,	h	Pittsburgh,	1826	200		
Pilot,	h	New York,	1827	240		
Potomac,	h	Pittsburgh,	1828	60	1833	Abandoned.
Porpoise,	h	Cincinnati,	1828	266		
Phenix,	h	Pittsburgh,	1828	230	1830	Burnt, near Bayou La Fourche.
Powhattan,	h	do.	1828	221		
Plaquemine,	h	do.	1828	65		
Pennsylvania,	h	do.	1827	130	1833	Abandoned.
Plaquemine,	h	do.	1829	160		
Planet,	h	Cincinnati,	1829	100		
Packet,	h	Pittsburgh,	1829	90		
Pacific,	h	Cincinnati,	1829	257		
Paragon,	h	do.	1830	90		
Pearl,	h	do.		60		
Peruvian,	h	Pittsburgh,	1830	460	1833	Snagged, below Natchez.
Pittsburgh,	h	do.	1831	100	1832	Lost by ice.
Polander,	h	Brownsville,				
Planter,	h	Pittsburgh,	1831	116		
Portsmouth,	h	Cincinnati,	1832	95	1833	Sunk in Wabash.
President,	h	Cumberland R.	1831	300		
Paul Clifford,	h	Cincinnati,	1831	100		Struck by S. B. Missourian
Peoria,	h	Elizabethtown,	1832	78		
Planter,	h	Pittsburgh,	1833	107		
Post Boy,	h	Steubenville,	1833	44		
Privateer,	h	Pittsburgh,	1832	140		
Plough Boy,	h	Louisville,	1833	80		
Protector,	h	Pittsburgh,	1834	136	1834	Burnt.
Paul Jones,	h	Cincinnati,	1834	170		
Princeton,	h	Rockville,	1834	133		
Potosi,	h	Pittsburgh,	1834	121		
Plough Boy	h	do.	1834	143		
Ponchartrain,		New Albany,	1834	145		
Patrick Henry,		Cincinnati,	1835	115		
Pawnee,		Pittsburgh,	1835	198		
Philadelphia,		Marietta,	1835	115		
Pioneer,		Pittsburgh,	1835	118		
Rifleman,		Louisville,	1818	281	1824	Burnt at Mobile.
Rapide,	h	Pittsburgh,	1819	180	1822	Burnt.
Robert Fulton,	l	New York,	1820	300		Worn out.
Rocket,		Louisville,	1820	75	1821	Worn out.
Rufus Putnam,	h	Marietta,	1822	60	1826	Snagged, near Fort Chient.
Robert Burns,	h	Cincinnati,	1825	125	1828	Burnt.
Rob Roy,	h	do.	1822	240	1829	Worn out.
Rambler,	h	Pittsburgh,	1823	120		
Red River,	l	Marietta,	1824	150		Worn out.
Robert Emmet,	h	Louisville,	1825	40		
Red River Pack.	h	Cincinnati,	1826	120		Worn out.
Reindeer,	h	Brownsville,	1826	60		Worn out.
Republican,	h	Cincinnati,	1826	50		
Rover,	h	do.	1827	100	1830	Worn out.
Rising Sun,		Rising Sun,		100		
Robert Fulton,	l	Cincinnati,	1828	126	1834	Worn out.
Red Rover,	h	Pittsburgh,	1829	50		Worn out.
Red Rover,	h	do.	1829	300		Worn out.
Rubama,	h	do.	1829	70		
Reaper,	h	Cincinnati,	1831	130	1832	Sunk, below Natchez.
Reindeer,	h	Brownsville,	1830	160	1833	Burnt, at New Albany.
Rambler,	h	Cincinnati,	1831	90	1833	Burnt, at Louisville.
Return,	h	near Pittsb'gh,	1832	137	1833	Sunk by ice.
Rapide,	h	New Albany,	1830	160		

Names.		Where built.	When built.	Tons.	Date of loss.	How destroyed.
Rising Sun,	h	Lawrenceburg,	1832	40	1833	Sunk, Tennessee River.
Richmond,	h	New Richmond	1832	40		
Rambler,	h	Nashville,	1831	100		
Randolph,	h	New Albany,	1833	300		
Reliance,	h	Brownsville,	1833	95		
Revenue,	h	Louisville,	1833	130		
Reindeer, 2d.	h	Brownsville,	1834	104		
Rob Roy,	h	Jeffersonville,	1834	192		
Rufus Putnam,	h	Marietta,	1835	90		
Roanoke,	h	Wheeling,	1835	100		
Robert Emmet,		do.	1835	104		
Robert Morris,		Pittsburgh,	1835	198		
Rover,		do.	1835	65		
Saint Louis,	h	Pittsburgh,	1818	250	1821	Burnt, near New Madrid.
Speedwell,	h	Big Bone,	1827	80	1828	Snagged, below Wheeling.
St.Louis Packet,	h	New Albany,	1826	150		
Shamrock,	h	Pittsburgh,	1827	125		Worn out.
Shepherdess,	h	Economy,	1827	140	1831	Worn out.
St. Mary,	h	Nashville,	1828			
St. John,	h	Cincinnati,	1828	100	1832	Sunk.
Star,	h	Pittsburgh,	1828	120		Name changed to Stranger.
Souvenir,	h	New Albany,	1828	140		
Seventy Six,	h	Cincinnati,	1829	200	1833	Sunk, striking a stump.
St. Louis,	h	do.	1829	145	1834	Snagged, in Grand Gulf.
Sylph,	h	do.	1829	70		
Saratoga,	l	do.	1829	140	1832	Burnt, at New Orleans,
Stranger,	h	Pittsburgh,	1828	100	1832	Worn out.
Shark, Tow B.	h	Cincinnati,	1829	315		
Superior,	h	Steubenville,	1823	70		
Scioto,	h	Gallipolis,	1822	170	1828	Worn out.
Swallow,						
Sam Patch,		Pittsburgh,	1830	30		
Shoalwater,					1831	Sunk.
Scout,	h	Pittsburgh,	1831		1833	Abandoned.
Samson,	h	Cincinnati,	1831	211		
Signal,	l	do.	1831	150		
Senator,	l	Portsmouth,	1831	183		
Statesman,	h	Brownsville,	1831	130		
Scotland,	h	New Albany,	1831	165	1835	Worn out.
Sentinel,	h	Brownsville,	1831	145	1833	Burnt, at Louisville.
Sangamon,	h	Pittsburgh,	1832	90		
Splendid,	h	Cincinnati,	1832	400		
Star of the West,	h	do.	1830	150	1835	Worn out.
Spy,	h	Fred'kstown,	1832	53	1833	Snagged, in Arkansas.
St. Martin,	h	New Albany,	1832	160	1833	Burnt, near Donaldsonville.
Superior,	h	Cincinnati,	1832	174		
Sea Gull,	h	Warren,	1833	40		
Shamrock,	h	Portland,	1831	230	1832	Sunk, by S. B. Baltic.
St. Landry,	h	do.	1832	150		
Sun,						
St. Leon,	h	Jeffersonville,	1833	80		
Science,		Fredericktown,	1834	70		
Southron,		Steubenville,	1834	140		
Siam,		Pittsburgh,	1835	198		
Swiss Boy,		Cincinnati,	1835	136		
Selma,		Pittsburgh,	1835	335		
South Alabama,		Elizabethtown,	1835	165		
Southerner,		Cincinnati,	1835	300		
Tamerlane,		Pittsburgh,	1818	307	1824	Worn out.
Tho. Jefferson,	h	do.	1818	250	1822	Worn out.
Teche,	l	New Orleans,	1818	206	1825	Burnt, below Natchez.
Telegraph,		Louisville,	1818	60	1819	Snagged, Island 21, Mississippi.
Telegraph,		Pittsburgh,	1819	160	1820	Burnt, near Point Chicot.

Names.		Where built.	When built.	Tons.	Date of loss.	How destroyed.
Tennessee,	l	Cincinnati,	1819	416	1823	Snagged, above Natchez.
Telegraph,			1821	100		Snagged, Cumberland River.
Tecumseh,	h	Cincinnati,	1826	212	1830	Worn out.
Tuscumbia,	h	do.	1826	230		
Triton,	h	do.	1826	50		
Talisman,	h	Pittsburgh,	1828	130	1829	Burnt, at St. Louis.
Traveller,	h	Wheeling,	1828	50	1832	Sunk, at St. Louis.
Talma,	h	Pittsburgh,	1829	140	1833	Worn out.
Tennessean,	h	Cincinnati,	1829	250		
Trenton,	h	Pittsburgh,	1829	150	1833	Snagged.
Tigress,	l	Cincinnati,	1828	200	1830	Burnt, at Rockport.
Tour,	h	do.	1829	170		
Tallyho,	h	Pittsburgh,	1829	150		
Tippecanoe,	h	Cincinnati,	1830	150		
Telegraph,	l	do.	1829	150	1833	Sunk, by S. B. New Orleans
Tariff,	h	Pittsburgh,	1829	30		
Tricolor,	h	Portsmouth,	1831	130		Burnt, below Wheeling.
Thos. Yeatman,	h	Cincinnati,	1830	115		
Tobacco Plant,	h	Nashville,	1831	300		
Tange paho,	h	Cincinnati,	1832	80		
Transport,	h	Pittsburgh,	1832	125		
Tuscarora,	h	Cincinnati,	1833	250		
Two Friends,	h	Jeffersonville,	1833	130		
Tom Bowline,	h	Portland,	1833	100		
Tiskilwa,	h	Kanawa,	1834	100		
Tuscaloosa,	h					
Tuscumbia,	h	Marietta,	1835	82		
Tempest,	h	Pittsburgh,	1835	112		
Teche,	h	Cincinnati,	1835	150		
Tuskina,	h	Pittsburgh,	1835	200		
United States,	l	Jeffersonville,	1819	644	1824	
Uncle Sam,	h	Pittsburgh,	1822	500	1835	Worn out.
Uncas,	h		1830	90		Name changed to Columbus
Union,	h	Williamsport,	1831	134		
Utility,	h	Louisville,	1831	30		
Vesuvius,		Pittsburgh,	1814	390	1821	Worn out. Burnt, 1816, and re-[built.
Vesta,		Cincinnati,	1816	100	1821	Worn out.
Volcano,	h	New Albany,	1818	217	1822	Worn out.
Virginia,	h	Wheeling,	1819	150	1822	Snagged, near Ste. Genevieve
Vulcan,	h	Cincinnati,	1819	232	1824	Worn out.
Velocipede,	l	Louisville,	1819	100	1824	Worn out.
Velocipede,	l	Cincinnati,	1824	100		
Virginia,	l	do.	1825	120		
Victory,	h	Pittsburgh,	1829	100	1832	Sunk
Virginian,	h	Cincinnati,	1829	90		
Venture,						Sunk.
Volunteer,		Steubenville,				
Volant,	h	Cincinnati,	1830	80	1830	Burnt.
Vermilion,	h	do.	1830	130		
Versailles,	h	do.	1831	90		
Vincennes,	h	Vincennes,	1832	100		
Veteran,	h	Mason co. Ky.	1833	80		
Van Buren,	h	Pittsburgh,	1833	90		
Velocipede,	h	Cincinnati,	1836	150		
Washington,	h	Wheeling,	1815	312	1822	Worn out.
West. Engineer,		Pittsburgh,	1819	30	1822	Worn out.
Wheeling Packet,		Wheeling,	1819	100	1823	Worn out.
William Penn,		Pittsburgh,	1825	150	1829	Snagged.
William Tell,	h	New Richmond	1826	90	1830	Worn out.
Warrior,	h	Marietta,	1826	150		
Walk in the water		New York,	1826	425		
Wm. D. Duncan,	h	Pittsburgh,	1827	160		Worn out.
Waverley,	l	Cincinnati,	1828	200		

Names.		Where built.	When built.	Tons.	Date of loss.	How destroyed.
Walter Scott,	à	Cincinnati,	1830	300		
Whig,	à	do.	1830	80	1831	Sunk by ice.
West Virginian,	à	Wheeling,	1829	90	1831	Sunk by ice.
Watchman,	à	Brownsville,	1830	120		
Wanderer,	à	New Albany,	1830	186		
Wm. Wallace,	à	Portland,	1831	90		
Winnebago,	à	Beaver,	1830	65		
Woodsman,	à	Pittsburgh,	1831			
Whale, Tow B.	à	Marietta,	1832	315		
Wm. T. Barry.	à	Cincinnati,	1832	153		Destroyed on Lake Ponchart'n.
Warrior,	à	Pittsburgh,	1832	110		
Water Witch,	à	Nashville,	1831	120	1833	Sunk near Plaquemine.
Wm. Parsons,	à	Ripley,	1831	110		
Wyoming,	à	Augusta,	1832	165		
Warsaw,	à	Wheeling,	1832	140		
Wabash,	à	New Albany,	18[illegible]	130		
Waterloo,	à	Jeffersonville,	1833	100		
William Penn,	à	Beaver,	1833	80		
Warren,	à	Cincinnati,	1833	300		Changed to Friend.
Warkey,	à	do.	1831	118		
Washington,		Bridgeport,	1834	145		
Wacousta,		Steubenville,	1834	107		
Woodsman,		Pittsburgh,	1832	98		
Ware,		Cincinnati,	1835	94		

Comparative view of the number of Steam Boats built at different places.

Pittsburgh,	173	Newport,	2
Cincinnati,	104	Frankfort,	2
Louisville,	33	New Richmond,	2
New Albany,	28	St. Louis,	1
Brownsville,	22	Grave Creek,	1
Wheeling,	19	Big Sandy,	1
Marietta,	16	Augusta,	1
Steubenville,	12	Richmond,	1
Jeffersonville,	10	Aurora,	1
Nashville,	8	Clarksville,	1
Portsmouth,	7	Licking River,	1
Cumberland River,	7	Zanesville,	1
Beaver,	7	Salt River,	1
Ripley,	6	Smithland,	1
Elizabethtown,	6	Maysville,	1
Bridgeport,	6	Morgantown,	1
New Orleans,	5	Rockville,	1
Silver Creek,	5	Lawrenceburgh,	1
Shousetown,	4	Rising Sun,	1
Portland,	4	Warren,	1
Fredericksburg,	3	Economy,	1
Big Bone,	3	Kenawa,	1
Kentucky River,	3	Williamsport,	1
Gallipolis,	3		
Brush Creek,	2		[illegible]

The proportions of the above to the several States in which Steamboats are built for the Western waters, are nearly as follows:

Ohio,	[illegible]	Virginia,	22
Pennsylvania,	216	Tennessee,	14
Kentucky,	86	Other places,	7
Indiana,	47		[illegible]

CHAPTER XIII.

Trade and Commerce.

After the view that we have given of the vast extent of the western plain, the great magnitude and variety of its resources, and the remarkable facilities for commercial intercourse afforded by its numerous rivers, it may be almost superfluous to remark that its business operations are valuable and widely ramified. Yet it is impossible to attempt any thing beyond general observations on this interesting subject, as the details would be too numerous to be crowded into a single volume. From the number of steam boats which we have shewn to be in the employ of the mercantile community, some inference may be drawn, in relation to the magnitude of the capital invested; but any calculation made from these data alone, would fall far short of the truth, and would afford an inadequate idea of the various resources of a country whose superficial limits are estimated by thousands of miles, whose population is counted by millions, and whose inhabitants are unsurpassed in industry, enterprise, and intelligence. The changes are so rapid as to mock any attempt to catch the features of the landscape, or to follow up the gigantic strides of moral and physical improvement. While this work has been passing through the press fifty steam boats have been launched into our waters, and already our list is defective to that amount.

Eight years ago the ground on which Chicago stands could have been purchased, for a sum which is now demanded for a front of six feet on one of the streets of that town.

About the same time the author was offered a lot in Alton, for *five* dollars, which is now probably worth two thousand dollars.

In 1830 a consignment of goods for "Beardstown, Illinois," was landed by mistake at Shauneetown, in the same state, where they remained for some time, because it was not known where Beardstown was. They had heard of Beard's ferry, on the Illinois river, and knew its exact position, and were not a little surprised to hear that a town had suddenly started into existence, between which and St. Louis several steam boats were regularly plying, before even its name was known to the people residing on the shores of the Ohio.

The important cities of the west are Pittsburgh, Cincinnati, Louisville, Nashville, Detroit, and St. Louis—yet there are fifty other towns, in a prosperous condition, which are considered as rivals of those we have named, by their inhabitants, who would doubtless feel indignant, at the exclusion of their names from the above list. But it is not our object to draw comparisons; and as we are not writing a gazetteer, we cannot enumerate the various commercial points of this region, nor speak of the advantages of each.

The cities above mentioned are those of the first class, but a large number of towns are rising rapidly into importance, and already enjoying a liberal share of the trade of the west. We shall not enumerate these, as we could not do justice to all, and would be unwilling to give offence by omitting any which might be deserving of notice.

Pittsburgh and Cincinnati are the most important manufacturing towns. At these places chiefly, steam-boats are built, and engines made for a variety of purposes. Some idea of the vast amount of machinery manufactured at those points, may be formed from the facts, that steam mills for grinding wheat are now becoming scattered over the whole west—that steam machinery is used very generally in the preparation of cotton and sugar—and that it is rapidly taking the place of water and horse power, in various branches of manufacture. At these places are also made, almost all of the heavy articles, which are fabricated from iron. From their work shops the vast regions which include a dozen states, are supplied with wagons, carts ,ploughs, harness, and all farming implements—with chairs and cabinet work of every description—with tin ware—with printing presses and types—with saddlery, shoes, and hats—with a large amount of books—and with a variety of other articles.

In the states of Kentucky, Tennessee, and Missouri, but little is manufactured, because the slaves, who are the only laborers, do not possess the kind of ingenuity, necessary to make them valuable mechanics. In Kentucky there are manufactories of hempen bagging, tobacco, and whiskey, and in Tennessee are valuable iron works. Further south the industry of the several states is almost entirely devoted to the production of Cotton and Sugar; and the vast supplies of manufactured articles needed for a wealthy, energetic, and highly refined community, are drawn from more northern latitudes. They import all their machinery, their tools, their furniture, and a large portion of all that they wear, or eat. Of these immense supplies Pittsburgh and Cincinnati furnish the greater portion—but not the whole. The country lying around the head of the Ohio, of which Pittsburgh may be considered as the centre, and the commercial metropolis, possesses an incalculable amount of the facilities for manufacturing, such as timber, coal, water power, and raw materials, while it occupies a commanding position at the head of navigation. Brownsville, Williamsport, Elizabethtown, Economy, Beaver, Steubenville, and a number of other towns, are actively engaged in manufactures, and contribute to the wealth of Pittsburgh.

As we descend the Ohio, the country becomes more fertile, and its agricultural products abundant. Wheeling like Pittsburgh, derives its business, partly from manufactures, partly from transportation of merchandise from east to west, and partly from commerce; but between that place and Cincinnati, the towns, such as Marietta, Portsmouth and Maysville, are more engaged in the shipment of produce than in mechanical employments.

Louisville, Nashville, and St. Louis, have no manufactures worthy of being mentioned in comparison with those of Pittsburgh and Cincinnati; but this remark is not made invidiously, or as affording any ground for the inference, which casual observers have often drawn, that the former cities possess less wealth or enterprise. It shews simply that their industry is directed in different channels. They are altogether commercial, and their wealth is employed in the interchange of the various commodities which enter into the traffic of this vast region—chiefly in the importation of merchandise from New Orleans, and the eastern cities, and the shipment of western produce to the southern and Atlantic markets.

It is a question often discussed, and which we shall not attempt to settle, which of these cities is preeminent in wealth and business. The dispute is unprofitable, and it is to be hoped that it may remain undecided; for there is no sober or practical view of the question, in which they can be considered as rivals. Neither of them can by its growth overshadow another, or drain its resources. Separated by wide tracts of country, and each the centre of a vast circle, daily augmenting in population, we can scarcely imagine any series of events which can change the relations of these cities to the whole country or to each other. Rapidly as they are advancing, their growth bears no proportion to that which must take place in the regions around them, of which they are respectively the marts; and smaller places of business are becoming established, to supply the wants of the country—but still tributary to the larger cities, which form the arterial channels of our commerce, and whose prosperity is equally essential to the whole country, and to each other.

In selecting a few facts in relation to the business of Cincinnati, for the purpose of illustrating the general subject before us, it is not intended to give prominence to this city in preference to the others. We collect our facts here because this is the place of our residence, and the data are more readily obtained, than similar details respecting distant places; nor can we discharge this part of our task better than by extracting the following remarks from an interesting article written by Benjamin Drake Esquire of this city, and published in the Western Monthly Magazine.

"Cincinnati is built upon an elevated and beautiful plane, on the north bank of the Ohio river, in latitude 39° 6′ 30″. From the junction of the Alleghany and Monongahela rivers, following the meanders of the Ohio, it is distant 455 miles, and from the union of the Ohio and Missisippi, 504 miles. Over land it is distant from Columbus, the capital of the state, 110 miles: from Sandusky City, 200 miles; from Indianapolis, 120 miles; from Frankfort, 85 miles; from Nashville, 270 miles; from Natchez, 680 miles; from New-Orleans, 860 miles; from St. Louis, 350 miles; from Louisville, 105 miles; from Baltimore, 518 miles; from Philadelphia, 617 miles; from Washington City, 500 miles; from New-York, by the way of Lake Erie, 900 miles; and from Charleston, 600 miles. The valley in which Cincinnati, Newport and Covington are built, is about 12 miles in circumference. The Ohio river enters this valley on the east, and passes out on the west side. The southern half of it is bisected by Licking river, which disembogues itself into the Ohio opposite Cincinnati, separating the towns of Newport and Covington. The upper plane on which Cincinnati is built, is 540 feet above tide water at Albany, and 25 feet below the level of Lake Erie. Low water mark in the Ohio, at this point, is 432 feet above tide water at Albany, and 133 feet below Lake Erie. The shores of the Ohio at this point, afford good landing for boats at all seasons of the year.

"In 1826 the manufacturing industry of Cincinnati, alone, amounted, according to an accurate statistical examination, to 1,800,000 dollars, in a population of 16,230 persons. At that time there were not more than fifteen steam engines employed in manufactures in the city. There are now upwards of 50 in successful operation, besides four or five in Newport and Covington. More than 100 steam engines, about 240 cotton gins, upwards of 20 sugar mills, and 22 steam-boats—many of them of the largest size—have been built or manufactured in Cincinnati, during the year 1835. If then, in the year 1826, with a population of but 16,230, the manufacturing industry of Cincinnati was 1,800,000 dollars, it is perfectly safe, with the facts before us, to place the productive industry for the year 1835, of Cincinnati, Newport, and Covington, with their population of 35,000 souls at 5,000,000 of dollars. The truth is that Cincinnati and her sister towns, are mainly indebted to their manufactures for the steady and onward prosperity which marks their career. Fortunately they have but few, if any, overgrown manufacturing establishments, but a large number of small ones, confided to individual enterprise and personal superintendence. These are distributed among all classes of the population, and produce a great variety of articles which minister to the wants, the comforts and luxuries, of the people in almost every part of the Mississippi valley. In truth, with the exception of Pittsburgh, there is no city in the West or South, that, in its manufactures and manufacturing capabilities, bears any approach to Cincinnati and her associate towns.

"The region inseparably connected with, and dependent upon Cincinnati, Newport and Covington, as their great commercial and manufacturing mart, embraces the country bordering on the two Miami rivers, the eastern portion of Indiana, and the adjoining parts of Kentucky, including the valley of Licking river. It may be estimated to contain 10,000,000 acres of land, having within itself the capabilities of sustaining 4,000,000 of inhabitants. This rich and salubrious region is traversed by the Ohio, Licking, and Great and Little Miami rivers, all of them navigable to some extent, and the two last eminently adapted to manufacturing purposes. It is a region which produces abundantly wheat, corn, barley, hops, oats, hemp, tobacco, horses, mules, sheep, cattle and hogs, to say nothing of the various mineral products, which lie beneath the soil, and the fine timber which rests upon it.

"The progressive increase of population in Cincinnati will appear from the following table. In 1810, there were 2,320 inhabitants—in 1813, there were 4,000—in 1819, there were 10,000—in 1824, there were 12,016, —in 1826, there were 16,230—at the present time, it may be safely placed at 31,000. If to this be added the population of Newport and Covington, the aggregate population will equal 35,000.

"For the want of the proper commercial regulations, the exports and imports from this point, annually, cannot be given with entire accuracy. At the close of the year 1826, the writer of this article, by a laborious examination, ascertained that the exports of that year were about 1,000,000 of dollars in value. A similar enquiry induced him to place the exports of 1832 at 4,000,000. For the year 1835, he feels no hesitation in placing them at 6,000,000, or upwards. This estimate is based upon the following facts and considerations.

"The general growth and prosperity of the city and surrounding country for the last few years; the increasing amount of tolls on the Miami canal; the enlarged number and variety of manufacturing establishments in Cincinnati, Newport and Covington, within the last four years; the arrival in Cincinnati during the greater part of the year 1835 of fifty stages and sixty mails per week; the steam-boat arrivals at our quay, for the last year, being 2,237; the receipt during the same period in this city of 90,000 barrels of flour, and 55,000 barrels of whiskey; and finally from the fact that, in the winter of 1832–3, there were 85,000 hogs slaughtered in Cincinnati—in 1833–4, something rising 123,000—while in 1834–5, (the whole of which, with those brought to this place in wagons and by the canal, went into the exports of the past year,) the number was 162,000. If from these we turn to the manufactures for the same period, embracing 22 steam-boats, 100 steam engines, 20 sugar mills, 240 cotton gins, besides the varied products of our countless factories in iron, wood, cotton, leather, hemp, oil, lumber, furs, &c. &c., it is perfectly obvious that the exports from Cincinnati, Newport and Covington, for the year 1835 have been above, rather than below, 6,000,000 of dollars.

"It is to be borne in mind, that Cincinnati, Newport and Covington have attained their present population, commerce and manufactures, without the aid of any work of internal improvement, but that of the Miami canal, and two Macadam turnpikes, one running sixteen miles towards Columbus, and the other twelve miles towards Lebanon. Let us now see what improvements of this kind are projected or actually in progress, the completion of which will directly and powerfully aid in their growth. 1. The extension of the Miami canal from Dayton to the Maumee Bay, a part of which will be completed early in the ensuing summer. 2. A Macadam turnpike from Chillicothe to Cincinnati, a part of which is under contract. 3. The continuation of the Cincinnati, Columbus, and Wooster, and the Cincinnati, Lebanon and Springfield turnpikes, portions of which have already been constructed. 4. The Cincinnati and Harrison turnpike, leading to the boundary line between Ohio and Indiana, a distance of twenty miles, which will be completed early in the present year, and hereafter continued to Brookville, Indiana.

5. A Macadam turnpike from Covington to Georgetown and Lexington, which is now constructing. 6. A canal, the construction of which is already authorized, from the sources of White Water, to Lawrenceburg, crossing the line between Ohio and Indiana into the county of Hamilton, and thence branching to this city. 7. The rail-road now making from Lawrenceburg, twenty miles west of Cincinnati, to Indianapolis, and the rail-road already authorised, to connect Lawrenceburg with this city. 8. The extension of the Cumberland road through Ohio and Indiana, crossing the Miami canal, and the routes of several of the turnpikes already enumerated, as they diverge to the north, from this city. 9. The rail-road running from this place up the valley of the Little Miami, and branching at Todd's fork, one track passing on to Xenia, and connecting with the Mad-river and Sandusky rail-road, (now constructing) at Springfield, and the other stretching north-eastwardly to Columbus, and thence to Lake Erie, at Cleveland. And finally, the great rail-road between this city and Charleston, the most magnificent and important public work that has yet been projected in our country. This road stretching through the states of Kentucky, Tennessee, and South Carolina, with branches passing off into Georgia and North Carolina in the south, and in the north sending a branch to Louisville, and another to Maysville, with the main track connecting at this point with the rail-roads running from Cincinnati to Indianapolis, and from Cincinnati to Sandusky and Cleveland on the lake, and also with the Miami canal, must of itself exert a degree of influence upon the future destiny of Cincinnati, Newport and Covington, that it is difficult to appreciate.

" These are works of internal improvement that are already begun or projected. They are all practicable—they will all be executed in less than six years from this time. The most difficult, expensive, and at first view unlikely to be accomplished, is that from the valley of the Ohio to the southern seaboard, yet we find that in less than five months from the time when public attention was first called to it, in this city, the states of South and North Carolina, Georgia, Tennessee, Kentucky, and Ohio, are alive to its speedy execution. And who can doubt that the people of these powerful, enlightened and prosperous states, will accomplish within a few years a work, which will bestow upon them in all coming time, so rich a harvest of social, political, and pecuniary blessings?

"Fully to comprehend the influence which these various works will exert upon Cincinnati, Newport, and Covington, it should be borne in mind that these places are near the centre of the largest and most fertile grain-growing region in the world; that these works of internal improvement, will traverse this district in a manner calculated to concentrate at this point, an immense amount of business; that in connection with this grain-growing region are exhaustless beds of iron, salt, coal, and other valuable minerals; that the climate is salubrious, and the temperament of the people active, ingenious and enterprising. The careful examination of these things cannot fail to convince the most skeptical that Cincinnati, Newport, and Covington, will enjoy continued and rapid advancement in wealth and population.

"Thus far the physical causes that are supposed to be operative in building up this city, have been principally considered. There are others that should not be overlooked. By recurring to the habits, taste, and moral and intellectual culture of the population of Cincinnati—the number of their literary, scientific, and benevolent institutions—their industry and enterprise—their quiet and orderly observance of the laws and municipal regulations, it will be found that these important elements in the progress and permanent prosperity of a city, are strong, varied, and in active operation.

"We cannot close this article without commending the taste and architectural skill, that have been put in requisition, in the construction of both our public and private buildings, within the last few years. Among the one hundred and fifty houses erected in Cincinnati, during the year 1835, there are many which would, in these particulars, do credit to any city in the Union. This is more particularly true of a number of warehouses—of St. Paul's church—of the two banking houses on Third street—and the ten or twelve edifices for the use of the common schools, all of which are large, commodious and elegant, and contribute in a high degree to the adornment of our beautiful city.

"Finally, it may be said, that Cincinnati yields to no city in the Union in the inducements which she presents to a residence within the noble amphitheatre of hills that surrounds her. This is true in regard to the intelligence, and refinement of society, the necessaries, comforts, and luxuries of life; the moral and religious character of her population: it is true in regard to the field which she presents for industry and enterprise in commerce and manufactures; it is true in regard to the opportunities she presents to the capitalist, for safe and profitable investments in *real estate.* On these points investigation is challenged, especially the latter; for it is confidently asserted that *real estate*, at the present time, is lower in value, in Cincinnati, Newport, and Covington, than any city of the Union, whose population, business, and permanent local advantages, are of corresponding magnitude. This single fact proves, incontestibly, that in the present prosperity of these places, there is nothing factitious, but that it is the natural result of those numerous indestructible moral and physical causes, which, before the year 1850, will give to Cincinnati and her associate towns, 100,000 active, educated and enterprising citizens."

We shall now place before the reader some very interesting tabular statements, which have been carefully compiled, and may be relied upon as accurate, and which shew, not only the amount and variety of articles shipped from the western states to New Orleans, but the gradual increase from year to year.

These tables afford a most remarkable exhibition of the industry of this region, and when we recollect that we are contemplating the commerce of a country the whole of which was a wilderness forty years ago, and the greater part of which has not been settled by white inhabitants half that period, the mind is lost in wonder. Yet they shew but a portion of our wealth. Vast quantities of the produce of our soil are carried from the shores of the northern lakes to New York—another portion finds its way to Philadelphia by the Pennsylvania canal—while immense numbers of horses and cattle are driven across the mountains by the various roads, leading to Philadelphia, Baltimore, Richmond, and other Atlantic cities. We have before us the statement of a gentleman, residing in Kentucky on the road leading towards South Carolina—a route comparatively unknown to the great mass of the American people—and never enumerated among the channels of trade—shewing the quantity of live stock that passed his door, for the southern market in the year 1835. In that year there passed from Kentucky, by this one road, by the house of Mr. James Renfro, the following number of animals:

Horses - - - -	4,716	prob. val. in market			$533,360
Mules - - - -	1,951				
Stalled beef - - -	9,485	do	do	do	104,370
Shoats - - - - -	2,887	do	do	do	18,000
Sheep - - - - -	1,320	do	do	do	5,280
Hogs - - - - - -	69,187	do	do	do	1,037,802
					$1,698,812

STATEMENT

of the imports into New Orleans, from the interior, by the Mississippi river, for ten years, from the 1st of October, to the 30th September, in each year.

ARTICLES.		1834.	1833.	1832.	1831.	1830.	1829.	1828.	1827.	1826.	1825.
Apples,	bbls.	9866	11131	12218	4500	8702	7779	10225	7317	4919	11827
Apple Brandy,	bbls.	50	. . . .	51	2	169	59	72	25	30	149
Bacon, assorted,	hhds.	3947	3683	4314	4869	30211	2868	3097	1533	470	1210
Bacon, assorted,	casks	1099	545	537	558	477	761	1050	464	202	. . .
Bacon, assorted,	boxes	323	216	370	1207	312	752	1190	274	143	385
Bacon Hams,	hhds.	7318	1821	2724	2086	322	2002	1423	1011	468	367
Bacon Hams,	boxes	758	15	65	305	176	1157	456	149	108	71
Bacon, in bulk,	lbs.	615324	653218	907380	1282354	309017	291001	229756	327289	360437	211250
Bagging, Kentucky,	pieces	23324	20391	23050	25036	12306	13472	5072	2795	5209	6191
Bale Rope,	coils	23263	20718	22973	43560	20288	10854	17038	11749	6654	4838
Beans,	bbls.	1125	13918	2833	1648	2960	1920	773	755	341	537
Butter,	kegs	8050	8779	4939	4106	5489	3005	3860	4561	2096	2130
Butter,	jars	194	745	363	205	105	148	138	110	427	60
Butter,	hhds.	. . . .	1	13	5	1	1	4	44	3	20
Butter,	firkins	22	140	75	113	357	145	187	108	110	102
Butter,	bbls.	80	160	165	446	63	. . .	. . .	. . .	. . .	. . .
Butter,	lbs.	. . . .	. . . .	. . . .	. . . .	. . .	3301	3056	27306	9100	8300
Beeswax,	bbls.	478	384	2	332	811	795	770	603	560	503
Beeswax,	boxes	5	185	374	183	73	40	69	185	17	29
Beeswax,	lbs.	28730	50	. . . .	500	441	5400	6484	8039	10075	12950
Beef,	bbls.	5455	5350	4550	19896	7566	5405	5622	1792	1903	1942
Beef,	hhds.	180	204	3	89	22	133	33	35	12	3
Beef, dried,	lbs.	39160	83910	172410	40600	200	2100	17272	4500	19000	4000
Buffalo Robes,	packs	1835	1937	1992	2554	3861	15210	19967	13412	7749	18411

COTTON.	Louisiana & Miss.,	Bales	307481	292748	198030	242427	174194	150570	191176	170295	143124	124670
	Mobile,	bales	5063	1533	17663	367	6093	6350	3484	2613	9185	7615
	Lake,	bales	9223	11974	7354	10338	9302	8753	8017	9627	7532	4908
	N. Alabama & Tennessee,	bales	135542	93303	114934	171616	168806	99355	92648	152166	96574	66895
	Missouri & Illinois,	bales	....	....	...	....	7	20	109	3	10	26
	Arkansas,	bales	1616	2862	1187	1769	1545	1332	1201	1739	1002	403
	Florida,	bales	5321	6278	9490	2024	3521	2807	1543	1481	1076	226
	Texas,	bales	917	155	540	335	163	284	...	...	...	...
Corn Meal,		bbls.	1665	2963	1996	2313	2443	6849	418	1827	729	3420
Corn in ears,		bbls.	98554	91513	71047	42194	42397	91882	89876	79937	143573	72563
Corn, Shelled,		sacks	62000	66693	7112	290754	21190	...	...	...	...	...
Cheese,		casks	117	145	329	120	179	84	147	6	3	17
Candles,		boxes	511	1819	127	103	622	318	731	124	121	708
Cider,		bbls.	1199	898	789	239	635	455	646	320	237	1023
Coal, Western,		bbls.	65000	24120	50000	....	40800	...	...	...	...	...
Dried Peaches,		bbls.	319	21	47	50	136	336	338	201	161	31
Dried Apples,		bbls.	1080	1190	250	65	231	126	140	368	215	105
Feathers,		bags	361	200	143	438	98	373	265	262	214	513
Flaxseed,		bbls.	3720	910	887	400	724	541	[illegible]	378	501	180
Flour,		bbls.	320660	262739	210887	360580	133700	157323	152593	131006	[illegible]	140546
Furs,		hhds.	67	279	149	103	80	67	6	174	217	201
Furs,		boxes	6	76	12	17	12	21	8	13	27	12
Furs,		bundles	479	876	671	318	387	431	271	123	164	449
Gin,		bbls.	330	509	468	....	10	143	225	73	33	...
Ginseng,		bags & cases	....	191	270	162	138	47	56	189	28	...
Ginseng,		lbs.	13600	....	....	....	...	...	350	62	46	150
Hemp,		bundles	32	375	437	27	6429	2137	724	...	19	1149
Hempen Yarn,		reels	27	85	333	18	398	379	256	42	99	237
Packing Yarn,		reels	36	....	16	....	88	...	...	...	...	...
Hides,			41439	22352	12920	22716	15827	18439	12934	29127	15659	11190
Horn,			38934	28645	30267	32686	21152	17327	23278	12924	12503	14852
Hay,		bundles	998	1634	1155	247	1022	777	167	615	682	598
Iron, pig,		tons	3123	1274	30	411	32	...	...	...	...	...
Iron, wrought,		tons	68	148	....	....	...	...	...	...	...	...
Iron,		lbs.	....	....	49283	....	2542	922348	1176022	680586	...	...
Lard,		hhds.	....	....	....	10	6	19	11	13	8	1
Lard,		bbls.	2359	680	1941	1358	117	531	1062	855	344	486

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STATEMENT OF IMPORTS, &c. Continued.

ARTICLES.		1834.	1833.	1832.	1831.	1830.	1829.	1828.	1827.	1826.	1825.
Lard,	kegs	199204	196276	151420	131111	70276	110206	115635	85865	51053	34373
Lard,	lbs.	....	....	....	505	....	12000	74073	146914	66776	47800
Leather,	bundles	636	856	325	489	214	519	312	594	553	410
Leather,	sides	....	....	....	....	240	125	385	849	1303	73
Lime, Western,	bbls.	3820	1642	....	....	....	....	....	....	....	....
Lead, pig,	pigs	203100	180062	122933	151251	254805	146203	183712	106405	86242	58479
Lead, bar,	kegs & bxs.	429	2964	353	2022	2034	782	471	1259	473	306
Lead,	lbs.	....	244000	245500	....	....	409641	....	....	190232	198244
Oats,	bbls.	16854	10415	2169	1852	4110	5210	1763	2162	3957	1267
Onions,	bbls.	1433	852	554	609	1325	548	357	566	227	[illegible]
Oil, Linseed,	bbls.	515	483	57	1666	1840	2940	2637	1723	708	422
Oil, Bear,	bbls.	93	154	48	151	146	254	63	91	29	127
Oil, Castor,	bbls.	363	275	347	572	726	166	91	68	....	....
Peach Brandy,	bbls.	269	407	25	5	206	217	192	34	52	82
Pecans,	bbls.	11	80	6	2	234	242	747	165	357	108
Pickles,	bbls.	....	73	57	19	108	156	88	200	39	5
Pickles,	kegs	283	849	230	983	1060	218	780	250	91	150
Potatoes,	bbls.	7045	13128	7842	2722	5148	5863	1852	4268	2119	2750
Pork,	bbls.	91985	59378	67672	62152	35407	49110	35817	25467	33632	15352
Pork,	hhds.	298	175	30	117	33	604	362	376	763	321
Pork, in bulk,	lbs.	2603860	4196182	4114096	953200	211128	941400	863690	201500	99853	146750
Porter and Ale,	bbls	1723	733	1516	206	631	424	536	120	296	242
Rum,	puncheons	500	66	....	....	....	....	....	....	....	....
Rum,	bbls.	2068	1776	397	684	87	416	296	362	298	140
Skins, Deer,	packs	5093	5223	3809	3805	4069	6215	3160	4169	11693	4820
Skins, Bear,	packs	174	311	197	140	128	150	155	253	161	396
Shot,	kegs	2064	1223	1196	3096	4528	2443	1127	2861	1472	1081
Shot,	bags	20	72	....	....	1	146	213	551	78	15
Soap,	boxes	1588	1867	76	408	1340	4475	6906	4118	2530	2367
Shingles,	-	55000	702	251	....	....	331	....	17	7	5

Soap,	boxes	1588	1867	76	408	1340	4475	6906	4118	2330	2267
Shingles,		55000	702	251	....	....	331	....	17	7	5
Staves,	M.	2000000	850000	700000	990000	933000	856000	827000	668000	776000	615000
Segars,	bbls.	50	27	2	...	...	22	11	14	6	6
Segars,	boxes	....	....	523	....	....	156	132	50	6	94
Moss, Spanish,	bales	580	1110	720	192	779	...	...	...	...	...
Tallow,	bbls	712	1936	1587	631	1237	3900	612	397	747	444
Tobacco, Leaf,	hhds.	24963	21361	30015	32708	33781	29432	30345	31704	19325	14040
Tobacco, Chewing,	kegs & bxs.	2383	2841	11468	1875	1668	4571	4978	2677	1028	2221
Tobacco,	carrots	145	1800	1447	1026	631	2137	2021	2556	1744	41
Tobacco,	bales	1236	2622	2272	....	....	...	...	...	...	...
Twine,	bundles	258	218	126	202	264	445	183	18	44	...
Twine,	boxes	66	42	11	21	67	139	234	41	47	10
Venison Hams,		9222	6229	970	4696	4135	28152	6670	3108	11603	191
Vinegar,	bbls.	159	958	64	124	63	79	1725	42	79	50
Whiskey,	bbls.	32437	33931	37012	30579	24391	26449	44407	35980	10596	32704
Window Glass,	boxes	3946	5100	1195	2115	4741	912	450	1189	1896	2504

This table being made to end with the autumn business, we are unable to procure the items necessary to bring it down to include the last year.

EXPORTS OF COTTON

From the New Orleans market, for the last nine years, commencing 1st of October, and ending 30th September.

WHITHER EXPORTED.	BALES OF COTTON.								
	1832-33.	1831-32.	1830-31.	1829-30.	1828-29.	1827-28.	1826-27.	1825-26.	1824-25.
Liverpool, .	216559	193[illegible]67	204132	179536	119036	134070	179526	107816	92301
London, . .	336		66		1550	70			25
Glasgow, &c.	8096	6927	14821	16413	8485	4920	12743	3162	6814
Cowes, &c. .	676	3771	802	60		1083	1270	1929	
Cork, . . .								3137	1492
Belfast, . . .			3553	883	1443	1637		874	1272
Havre, . . .	73030	63462	47446	76022	61968	57919	52174	58561	30609
Bordeaux, .	1541	1836	1045	2978	1992	1994	2680	1734	1599
Marseilles, .	5119	10020	7805	9896	11661	4833	3131	1998	242
Nantz, . . .	2612	2820	4104	2668	1809	1679	1742	1467	384
St. Valery . .			53	707					
Cette & Rouen,			370	1175	940		374		
Amsterdam, .	50	392	226	899	1563	661	898	977	
Rotterdam, &c.		70		34	38	729		516	
Flushing, . .					1039				
Bremen, . .	926	1026	401	323	831	1525	1900	773	
Antwerp, &c.		370		2358	5101	1379	4683	1865	
Hamburg, . .	1176	1870	2049	499	4180	3806	1651	335	723
Gottenberg, .	1186	695	235	100	201	115	147	34	50
Gibraltar, &c.								131	
Spain, . . .	1615	4562	602	85					
West Indies, .	75		4	2				6	
Genoa, &c. .		1190	1794	1136	5095	1379			
Other ports, .									
New York, .	31497	21955	55737	30915	20009	28486	37207	36839	51810
Boston, . .	28868	25078	36[illegible]27	13686	12333	20006	9815	11903	7439
Providence, .	13651	46[illegible]1	26709	4530	3570	13709	6932	8832	4804
Philadelphia, .	72[illegible]9	4607	10607	4277	3449	9921	9265	5172	3260
Baltimore, .	4747	1614	5750	1580	1164	2744	3155	3053	1733
Portsmouth, .	4760	334[illegible]	5593						
Coastwise, .	3465	520	364[illegible]	1128	492	1281	389	310	
TOTAL.—	407220	356406	424681	351890	267949	[illegible]	329682	251924	204557

RECAPITULATION.

G. Britain, .	225667	203365	223374	196892	130514	142546	193539	116918	101904
France, . .	82302	78138	60913	93446	78370	66425	60101	63760	32834
N. of Europe.	3338	4423	2911	4213	12953	8215	9279	4500	773
S. of Europe,	1690	5752	2400	1223	5095	1379		137	
Coastwise, .	94223	64728	135086	56116	41017	86[illegible]	66763	66609	69046
TOTAL.—	407220	356406	424684	351890	267949	[illegible]	329682	251924	204557

EXPORTS OF TOBACCO

From New Orleans, for the last nine years, commencing 1st of October, and ending 30th September.

WHITHER EXPORTED.	HHDS. OF TOBACCO.								
	1832-33.	1831-32.	1830-31.	1829-30.	1828-29.	1827-28.	1826-27.	1825-26.	1824-25.
Liverpool, .	1189	1490	2631	819	801	[illegible]	1166	1589	1567
London, . .	1422	346	637		1082	[illegible]			411
Glasgow, &c.									
Cowes, &c. .	2264	6612	2663	973	2684	2856	1666	300	658
Cork, . . .									342
Belfast, . . .									36
Havre, . . .	20	506	58	325	130	[illegible]	549		
Bordeaux, .	10	70	200	119	100	[illegible]	203		16
Marseilles, .				7			18		60
Nantz, . . .	5								
St. Valery . .									
Cette & Rouen,									
Amsterdam, .	187	889	699	1029	1720	1276	1225	901	
Rotterdam, &c.		426	289	681	324				
Flushing, . .									
Bremen, . .	2129	3265	2364	3024	1186	3458	2271	1421	137
Antwerp, &c.	492	389		6		256			
Hamburg, . .	[illegible]	1431	1278	95	95	978	353	80	487
Gottenberg, .	876	757	225	326	407	558	374	259	478
Gibraltar, &c.	134			360	145	3498	2327	1063	2166
Spain, . . .	189	920	1834	5297	7062				201
West Indies, .	82	375	417	1047	98	746	430	636	193
Genoa, &c. .	19	101			143	50			
Other ports, .		5	273						30
New York, .	6816	7863	17099	7185	5197	9015	[illegible]	5043	6090
Boston, . .	3037	2602	3970	3219	713	6211	2742	3175	1366
Providence, .		1				35	251	71	364
Philadelphia, .	1518	2968	2193	2764	1433	2135	2170	1021	1987
Baltimore, .	217	418	882	520	475	749	857	700	165
Portsmouth, .			42						
Coastwise, .	2159	1540	1054	902	856	334	480	421	231
TOTAL—	23701	32974	34968	28028	25401	35111	26570	18480	16849

RECAPITULATION.

G. BRITAIN, .	4875	8448	6131	1792	4567	5100	[illegible]	1889	3008
FRANCE, . .	35	576	258	451	[illegible]	[illegible]	770		76
N. OF EUROPE,	4320	7157	4815	5161	3732	6526	4163	2061	1109
S. OF EUROPE,	424	1401	2524	6641	[illegible]	4291	[illegible]	2500	2500
COASTWISE, .	14047	[illegible]	21260	[illegible]	[illegible]	18360	6092	11331	10073
TOTAL—	23701	32974	34968	28028	25491	35111	[illegible]	18480	16849

EXPORTS OF SUGAR AND MOLASSES,

From New-Orleans, for four years, (Mobile, Pensacola and up the river excepted,) from 1st October to 30th September.

WHITHER EXPORTED	1832–33.				1831–32.				1830–31.				1829–30.			
	SUGAR.		MOLASSES.		SUGAR.		MOLASSES.		SUGAR.		MOLASSES.		SUGAR.		MOLASSES.	
	Hhds.	Bbls.	Hhds	Bbls.	Hhds.	Bbls.	Hhds.	Bbls.	Hhds.	Bbls.	Hhds	Bbls.	Hhds.	Bbls.	Hhds.	Bbls.
New-York. . . .	10346	346	8522	3666	17198	864	7907	5987	22729	600	10942	7683	9062	381	5967	1900
Philadelphia, . .	7291	767	3017	2965	8107	387	1149	1584	11400	618	2702	786	6052	124	2608	1248
Charleston, S. C. .	2449	1112	406	1016	2564	561	793	622	4384	359	984	1547	1585	104	362	1189
Savannah, . . .	227	50	190	280	449	110	176	767	1590	145	252	357	612	56	443	126
Providence, R. I. .	177	7	325	361	639	99	1368	471	9	69	488	1144	...	8	187	88
Boston, ...	446	69	812	956	1387	118	1142	1043	182	160	129	1175	205	22	375	474
Baltimore, . . .	6717	565	3662	1642	5454	1046	1455	794	10740	606	402	1932	4674	37	716	469
Norfolk, ...	1179	100	699	441	517	16	184	458	1093	54	280	274	601	21	396	152
New-Haven, . . .	...	...	...	...	...	1	1353	117	...	...	...	...	45	2	1146	43
Richmond, Va. . .	391	228	257	247	391	14	201	141	341	20	151	159	115	6	87	86
Bristol, R. I. . .	...	...	...	...	...	...	211	...	...	8	189	29	...	...	184	68
Alexandria, D. C. .	115	...	15	...	98	1	124	...	327	3	202	69	...	...	...	...
New-Bedford, . .	...	...	192	18	...	...	...	...	...	...	...	...	...	...	...	...
Portsmouth, N. H. .	...	...	57	...	...	41	590	36	60	48	568	608	...	...	...	...
Stonington, Con. .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	91	1
Mexico.	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	700
Other ports, . . .	...	33	421	24	...	137	742	201	136	52	1477	266	...	6	...	...
TOTAL—	29338	3287	18443	11576	36804	3395	17395	12221	54430	2742	23547	16029	22951	773	19648	6544

MONTHLY ARRIVALS,

Of Ships, Brigs, Schooners, Sloops and Steamboats, for four years, from 1st October to 30th September. Taken from the Files of the New-Orleans Price Current and Commercial Intelligencer.

MONTHS.	1832–33.						1831–32.						1830–31.						1829–30.					
	Ships, . .	Brigs, . . .	Schrs. . .	Sloops, . .	TOTAL, .	S. Boats.	Ships, . .	Brigs, . .	Schrs. . .	Sloops, . .	TOTAL, .	S. Boats,	Ships, . .	Brigs, . . .	Schrs. . .	Sloops, . .	TOTAL, .	S. Boats.	Ships, . .	Brigs, . . .	Schrs. . .	Sloops, . .	TOTAL, .	S. Boats.
October.	21	26	33	0	80	66	25	32	37	1	95	50	19	22	21	3	65	27	12	22	18	3	55	29
November, . .	31	24	30	0	85	73	38	43	48	2	131	85	45	61	32	4	142	49	40	48	31	2	121	59
December, . .	65	32	37	0	154	140	41	43	49	10	133	84	37	35	40	3	115	90	50	43	35	3	131	98
January.	30	46	45	1	131	173	33	49	64	6	152	102	23	26	38	1	98	85	20	61	31	2	114	96
February, . . .	32	59	72	0	183	142	29	41	58	3	131	94	29	40	51	2	122	71	24	73	53	3	153	69
March.	62	45	61	0	138	125	36	57	57	4	154	107	35	51	68	7	161	114	18	37	34	6	95	96
April.	46	46	52	1	147	104	22	30	60	4	116	109	37	66	46	6	155	116	42	43	38	4	127	90
May.	46	45	46	0	137	84	43	33	51	2	129	108	74	87	68	6	235	109	34	36	29	4	103	83
June, ...	29	27	30	0	86	68	31	20	20	1	82	61	21	59	43	2	125	79	25	37	25	2	89	80
July.	20	28	18	0	66	35	14	21	25	. . .	60	30	26	39	35	2	102	41	15	19	28	2	64	39
August. . . .	6	15	25	0	47	31	15	24	21	. . .	60	23	11	25	30	1	67	20	2	15	24	1	42	12
September. . .	17	13	29	0	50	40	11	6	20	. . .	37	34	12	23	20	. . .	55	22	4	11	20	1	26	17
TOTAL—	405	428	480	2	1304	1081	338	399	510	33	1280	887	369	544	492	37	1442	813	286	445	366	33	1120	778

Arrivals, Exports and Stocks of Cotton and Tobacco, in the Port of New Orleans, for the last nine years—from 1st of October, to 30th September.

YEARS.	COTTON.			TOBACCO.		
	Arrivals.	*Exports.*	*Stocks.*	*Arrivals.*	*Exports.*	*Stocks.*
	Bales.	Bales.	Bales.	Hhds.	Hhds.	Hhds.
1832-33	410104	407220	9457	22074	23701	1430
1831-32	349797	356406	7088	30015	32974	3257
1830-31	428876	424684	13697	32708	34968	6416
1829-30	363641	351890	9505	33781	28028	9492
1828-29	269571	267949	5557	24432	25491	4239
1827-28	298042	304848	4365	30224	35111	648
1826-27	337934	329682	11171	31704	26570	6442
1825-26	251983	251924	3030	19385	18480	1862
1824-25	206793	204557	3737	18409	16849	1332

Monthly arrivals of Flour, in the Port of New Orleans, from 1st October to 30th September, 1832–33, taken from the Books of the Inspectors.

October, ...	bbls.	7656	April, ...	bbls.	26030
November, ...	"	32266	May, ...	"	23404
December, ...	"	21370	June, ...	"	30928
January, ...	"	37954	July, ...	"	9164
February, ...	"	23960	August, ...	"	23893
March, ...	"	24047	September, ...	"	12718

LIST OF BANKS IN OHIO.

Names of Banks.	*Where situated.*	*Capital authorized.*	*Capital paid in Dec.*1837.	*Names of Cashiers.*
Lancaster Ohio Bank,	Lancaster,	$500,000	321,363	**M. Garaghty.**
Bk. of Marietta,	Marietta,	500,000	132,507	**A. T. Nye.**
Western Reserve Bank,	Warren,	500,000	198,662	**Ralph Hickox.**
Belmont Bank of St. Clairsville,	St.Clairsville	500,000	240,370	**Wm. McNeely.**
Bk. of Massillon,	Massillon,	200,000	200,000	**Parker Handy.**
Bank of Circleville,	Circleville,	200,000	200,000	**Hall Lawrence,**
Bank of Muskingum,	Putnam,	500,000	150,000	**A. G. Allen.**
Commercial Bk. of Scioto,	Portsmouth,	500,000	275,195	**H. Buchanan.**
Clinton Bank of Columbus,	Columbus,	300,000	300,000	**J. E. Jeffords.**
Farmer's Bank of Canton,	Canton,	100,000	100,000	**Wm. Fogle,**
Dayton Bank,	Dayton,		172,882	**Alex. Grimes,**
Bank of Geauga,	Painesville,		152,061	**George Mygatt.**
Franklin Bank of Cincinnati,	Cincinnati,	1,000,000	1,000,000	**W. Hooper.**
Bank of Zanesville,	Zanesville,	500,000	266,673	**C. C. Gilbert.**
Franklin Bank of Columbus,	Columbus,	500,000	481,560	**J. M. Espy.**
Ohio Life Insurance and Trust Co.	Cincinnati,	2,000,000	2,000,000	**J. N. Perkins.**
Bk. of Norwalk,	Norwalk,	300,000	165,719	**John R. Finn.**
Columbiana Bk. New Lisbon,	New Lisbon,	500,000	60,000	**B.W.Snodgrass.**
Granville Alexandrian Society Bank,	Granville,	600,000	156,728	**A. J. Smith.**
Bank of Cleveland,	Cleveland,	300,000	230,575	**H. Handy.**
Bank of Xenia,	Xenia,		100,000	**E. F. Drake.**
Commercial Bk. of Cincinnati,	Cincinnati,	1,000,000	1,000,000	**James Hall.**

Names of Banks.	*Where situated*	*Capital authorized.*	*Capital paid in Dec.1837.*	*Names of Cashiers.*
Commercial Bk. of Lake Erie,	Cleveland,	500,000	500,000	T. P. Handy.
Miami Exporting Company,	Cincinnati,		296,225	A. Moore.
Branch at Coneaut,	Coneaut,			Wm. More.
Bank of Mount Pleasant,	M't Pleasant,	200,000	195,095	Enoch Harris.
Bk. of Sandusky,	Sandusky,		100,000	R. Whitney.
Farmers' & Mechanics' Bk. of Steubenville,	Steubenville,	500,000	326,437	David Moody.
Bank of Chillicothe,	Chillicothe,	500,000	500,000	J. Woodbridge.
Urbana Banking Company,	Urbana,	200,000	180,302	W. Rianhard.
Bk. of Wooster,	Wooster,		198,761	J. S. Lake.
Bk. of Hamilton,	Hamilton,	300,000	100,000	C. K. Smith.
Lafayette Bank of Cincinnati,	Cincinnati,	1,000,000	1,000,000	W. G. W. Gano.
Bank of West Union,	West Union,		30,500	Alfred Barnes.

LIST OF BANKS IN KENTUCKY.

Names.	*Where situated.*	*Capital.*	*Capital paid in.*	*Names of Cashiers.*
Bk. of Ken'y.	Louisville,	5,000,000	4,588,770	G.C.Gwathmey.
Branch do. at	Frankfort,			E. H. Taylor.
Ditto,	Lexington,			W. S. Waller.
Ditto,	Maysville,			Robert Taylor,
Ditto,	Danville,			Thos. Mitchell,
Ditto,	Bowling-Green,			Richard Curd.
Ditto,	Greensburg,			Wm. D. Barrett.
Ditto,	Hopkinsville,			R. Rowland.
Northern Bk. of Ken'y.	Lexington,	3,000,000	2,647,400	M. T. Scott.
Branch do. at	Louisville,			W. Richardson.
Ditto,	Covington,			P. S. Bush.
Ditto,	Richmond,			W.McClanahan.
Ditto,	Paris,			Thomas Kelly.
Bk. of Louisville,	Louisville,	1,150,000	1,150,000	A. Thruston.
Louisville Savings Insti.	Do.		104,188	

STATE BANK OF INDIANA.

Chartered 1834—*Expires* 1859.

This bank is composed of a number of branches, whose united capital forms that of the bank. One half of the stock is owned by the State. Each branch has its own stockholders, and is independent of the others in the division of profits; but the State Bank, and each branch thereof, are mutually responsible for the debts of each other. $160,000 is assigned to each branch as its capital, but if that amount canot be advantageously used at any branch, a portion of the State stock may be transferred to another branch.

A president and four directors are appointed by the State, and one by each branch, and this board meets periodically at the seat of government. There is a cashier, who keeps an office at the same place; but the State Bank, as such, has no office of discount and deposite.

Each branch has a separate directory; the central board being composed of a representative from all the branches, and having a supervisory power over the whole, it is not practicable for any branch to extend its business beyond safe limits, without the knowledge of the others, which being interested in the risk, but not in the profits of each other, have no inducement to assent to such mismanagement.

LIST OF BANKS IN INDIANA.

Name of Bank.	*Where situated.*	*Capital paid in.*	*Names of cashiers.*
State Bk. of Indiana,	Indianapolis,		James M. Ray.
Branch of ditto, at	Do.	$ 160,000	B. F. Morris.
Ditto,	Lawrenceburgh,	205,000	E. D. John.
Ditto,	Madison,	240,000	John Sering.
Ditto,	New Albany,	160,000	J. R. Shields.
Ditto,	Evansville,	160,000	John Douglass.
Ditto,	Bedford,	140,000	D. R. Dunihue.
Ditto,	Vincennes,	160,000	John Ross.
Ditto,	La Fayette,	200,000	James White.
Ditto,	Terre Haute,	160,000	A. B. Fontaine.
Ditto,	Fort Wayne,	158,812	H. McCulloch.
Ditto,	Richmond,	160,000	Elijah Coffin.

State Bank, $ 1,903,812.

STATE BANK OF ILLINOIS.

Capital $1,500,000.

Chartered February 12, 1835—to continue to January 1, 1860. May charge 6 per cent. discount on loans for 60 days and under, and 8 per cent on loans for over 6 months and under 12 months. May have a circulation of twice and a half the capital paid in. Charter forfeited for not paying specie within 10 days after demand.

May borrow $1,000,000 additional, and loan the same on real estate at one half its value, for a term not exceeding five years, and at no higher rate of interest than 10 per cent. per annum.

Name of Bank.	*Where situated.*	*Capital.*	*Names of Cashiers.*
State Bk. of Illinois,	Springfield,	1,500,000	N. H. Ridgeley.
Branch of ditto, at	Vandalia,		J. T. B. Stapp.
Ditto,	Jacksonville,		T. O. Duncan.
Ditto,	Mount Carmel,		W. T. Page.
Ditto,	Chicago,		Wm. H. Brown.
Ditto,	Galena,		— Bostwick.
Ditto,	Alton,		T. H. Lea.
Ditto,	Quincy,		J. G. Lamb.

BANK OF ILLINOIS.

Name of Bank.	*Where situated.*	*Capital.*	*Names of Cashiers.*
Bank of Illinois,	Shawneetown,	1,700,000	John Siddall.
Branch ditto, at	Alton,		D. T. Wheeler.
Ditto,	Jacksonville,		

◆

MIAMI CANAL.

Mr. Latham, resident engineer on the Miami Canal, has kindly furnished us with the following statement of facts. He has been at some pains to make them accurate, and they contain valuable information.

Statement of the amount of tolls collected on the Miami Canal, between Cincinnati and Dayton, from the commencement of navigation, on the 18th of March, 1828, *to the 31st of December,* 1837—*a period of about ten years:*

1828,	$ 8,507 69	1833,	$52,014 03	
1829,	20,947 22	1834,	50,963 11	
1830,	30,125 77	1835,	46,561 75	
1831,	34,016 71	1836,	52,048 15	
1832,	40,974 73	1837,	66,154 72	—Total, $402,214 58.

Of this sum, there was collected at the different offices on the canal, as follows:

Cincinnati, - - -	$ 183,253 84
Hamilton, - - -	33,484 97
Middletown, - - -	63,899 99
Dayton, - - -	121,575 78

During the above ten years the canal was closed by ice, as follows:

1828, 13 days.
1829, 32 days.
1830, 53 days.
1831, 87 days.
1832, 10 days.
1833, 39 days.
1834, 34 days.
1835, 12 days.
1836, 30 days.
1837, 22 days.

Making an average in 10 years of 33 days for each year.

The shortest time the canal was closed in any one year, was 10 days, the longest time, 87 days.

The total cost of the Miami Canal, exclusive of the locks in Cincinnati, is - - -	$ 727,864 84
The total amount expended in repairs, for the completion of the canal to the 1st Dec. 1837, is	162,499 60
The total expenditure for construction and repairs, up to the 1st Dec. 1837, is, therefore,	$ 890,364 44
And the amount received in tolls, up to the same period, is - - - - - -	$ 402,214 58

From this statement we make the following inferences:

1st. The sum total of the receipts has paid about 5 per cent. on the sum total of the cost, repairs, and expenses. This is the rate of interest actually paid by the State; and hence, the canal has now cost the State nothing by taxation.

2d. But next, the income last year was more than 7 per cent., and has been progressively on the increase during the whole period in which it was navigable. Hence, in future, it must pay both interest and part of the capital. Consequently, in a very few years (probably not more than ten) it will have paid for itself, both interest and principal, and will be a large source of revenue to the State.

A LIST OF STEAMBOATS

Navigating the Louisville and Portland Canal in 1837—*Showing their respective Tonnage and Canal Toll.*

Those boats marked thus (*) are principally new boats of 1836, or boats that never passed through the canal previously; and those marked (†) are boats of 1837.

S—Sunk. D—Defunct. B—Burnt.

JOHN HULME, *Collector.*

NAMES.	MEASUREMENT.		CANAL TOLL.	
	Tons.	*95ths.*	*Dolls.*	*Cts.*
Adriatic,	381	75	228	95
Abeona, S	151		90	60
Algonquin,	221	45	132	87
Andrew Jackson, S	98	45	59	07
Argus, D	121	89	73	13
Arabian,	97	37	58	36
Artiste,	94		56	40
Alert,	103	43	62	05
Aid, D	83	57	50	14
Adventure,	49	05	29	43
Argo,	84	89	50	93
Arkansaw, S	115		69	
Alice Maria,	72	48	43	48
American,	128	40	77	04
Anna Calhoun,	133	57	80	14
Alpha,	51	25	30	75
Augusta,*	290	60	174	36
Atalanta,*	180		108	
Ajax,*	120	27	72	16
Amity,*	25	79	15	47
Alabamian,*	165		99	
Arthur M. Philiph,†	175		105	
Avalanche,†	143	22	85	93
Albany,†	158	20	94	92
Astoria,†	148	20	88	92
Arab,	150		90	
Amboy,†	120		72	
Arkansas,†	185	89	111	50
Asia,†	326	30	195	75
Baltic,	407	83	244	69
Belfast, B	435	89	261	53
Boonslick, S	295	51	177	30
Bunker-Hill,	301	11	180	66
Bonnets o' Blue, S	177	78	106	66
Boston, D	148	14	88	88
Banner, D	84	20	50	52

NAMES.	MEASUREMENT.		CANAL TOLL.	
	Tons.	*95ths.*	*Dolls.*	*Cts.*
Bonita, - -	139	91	83	94
Bolivar, - -	77	55	46	53
Ben Franklin, - -	98	82	59	29
Big Black, - -	81	14	48	68
Ben Sherrod,* B	393	24	235	94
Boonville,* - -	114	60	68	76
Bee,* - -	105	55	63	33
B. I. Gilman,*S - -	85		51	
Brighton,* - -	93	58	56	14
Baltimore,* - -	111	75	67	05
Ben Franklin,* - -	194	45	116	67
Brian Boroihme,* -	187	43	112	45
Buffalo,† - -	115	30	69	18
Belle,† - -	201	45	120	87
Bridgewater,† - -	160		96	
Bonaparte,† - -	185		111	
Burlington,† - -	200	35	120	18
Black-Hawk, - -	159	55	95	73
Brilliant,† - -	235		141	
Buckeye,† - -	170		102	
Chancellor, - -	423	33	254	
Constitution, - -	262		157	20
Chief Justice Marshall, D	196	55	117	93
Champion, D - -	195	58	117	34
Caledonia, D - -	122	90	73	74
Companion, D - -	89	45	53	67
Cygnet, - -	66	90	40	14
Calavar, D - -	[illegible]	20	50	52
Cumanche, - -	169	80	101	88
Citizen, D - -	97	25	58	35
Chian, - -	100	36	60	21
Coquette, - -	90	36	54	21
Chickasaw, - -	149	05	89	43
Ceres, - -	58	34	35	
Caroline, - -	187	48	112	48
Canton, - -	103	81	62	28
Chesapeake, D - -	154	77	92	86
Catahoochee, - -	99	12	59	47
Cumberland, B - -	149	38	89	62
Cloutierville,* - -	160	46	96	27
Chariton,* - -	112	48	67	48
Columbus,* - -	340		204	
Clinton,* - -	102		61	20
Concord,* - -	58	48	35	08
Cuba,* - -	82		49	20
Champion,* (N. Y.) -	241	88	145	12
Clyde,* - -	193	80	116	28
Claibourne,* - -	295	78	177	46

NAMES.	MEASUREMENT.		CANAL TOLL.	
	Tons.	*95ths.*	*Dolls.*	*Cts.*
Crusader,*	97	85	58	71
Comet,*	128	65	77	19
Commerce,*	165		99	
Cavalier,	110		66	
Cahawba,*	99	45	59	67
Chamoise,*	125	40	75	24
Chas. L. Bass,*	103	75	62	25
Camden,†	103	35	62	13
Convoy,	315		189	
Casket,†	90	39	54	25
Ceylon,† B	257	71	154	62
Corinthian,†	296	55	177	93
Columbus,* [Mobile,]	194	50	116	70
Cinderella,†	125	25	75	12
Columbian,*	114	50	68	70
Chilicothe,†	299	80	179	88
Commodore,†,	225		135	
Conqueror,†	336	80	202	08
Diana, S	103	25	61	95
Dove, D	97	72	58	63
Despatch,	105	15	63	09
Detroit,	136	70	82	00
Dover,	79	64	47	78
Dubuqe,	74	63	44	77
Denmark,	54	90	32	94
Dayton,*	111	34	66	80
De Kalb,*	125	60	75	36
D. Crockett,†	99	80	59	88
Dolphin,†	156	38	93	81
Ellen Douglass,	270		162	00
Express, No. 1, D	105	81	63	48
Envoy, D	91	81	55	08
Emigrant,	88	40	53	04
Echo,*	158		94	80
Exchange,*	67	83	40	69
Emblem,*	120	70	72	42
Emerald,*	123	56	74	13
Erin,	88	90	53	34
Elk,†	99	80	59	87
Express, No. 2,†	59	63	35	75
Embassy,†	144	92	86	95
Empress,†	199	40	119	64
Farmer, [Cin.]	277	33	166	39
Farmer, [Mobile,]	232	03	139	21
Freedom, D	142	82	85	69
Flora,	118	75	71	25
Fame, D	132	29	79	37
Free Trader,	109	85	65	91

NAMES.	MEASUREMENT.		CANAL TOLL.	
	Tons.	*95ths.*	*Dolls.*	*Cts.*
Fairy Queen, D	60	20	36	12
Far West,*	150	30	90	18
Fort Adams,*	180	42	108	25
Floridian,*	99	35	59	49
Florida,*	109	85	65	91
Fancy,† B	210		126	00
Frontier,†	63		37	80
Fox,	88	75	53	25
Fayette,†	112	70	67	62
Florence,†	86	94	52	12
Fairy,†				
Frances,†	112	72	67	63
Favourite,†	158	38	95	02
Gazelle,	129	88	77	92
Guide,	96	23	57	73
Gladiator,	99	45	59	67
Galapolis,	74	92	44	95
Genl. Sumter,	160	26	96	15
Geo. Washington,*	317	91	190	74
Galenian,*				
Genl. Gaines,*	194	92	116	95
Gipsey,*	79	45	47	67
Genl. Brown,*	195	49	117	25
Gov. Clark,	146	56	87	93
Ganges,*	155	60	93	36
Girard,*	139	60	83	75
Grand Gulf,*	79	73	47	83
Georgia,†	135	65	81	39
Gov. Shelby,†	199	55	119	73
Gov. I. Pickens,†	218	35	131	00
Genl. Wayne,*	208	24	124	92
Henry Clay,	424	87	254	92
Homer,	410	08	246	00
Huntsville,	339	83	203	89
Heroine, No. 1,	146		87	60
Heroine, No. 2, D	96	73	58	03
Hunter,	104	65	62	79
Huntress,	97	39	58	43
Hero,	89	69	53	81
Hawk-eye,	116	68	70	00
Helen Mar, D	88	93	53	35
Herald, D	86	30	51	78
Hyperion,	124	90	74	94
Hail Columbia,*	279	39	167	63
Howard,*	122	20	73	32
Havana,*	138	65	83	19
Hudson,*	145		87	00
Harry Hill,* D	161	25	96	75

NAMES.	MEASUREMENT.		CANAL TOLL.	
	Tolls.	*95ths.*	*Dolls.*	*Cts.*
Hinds,*	130		78	00
Harkaway,*	91	47	54	87
Home,*	75		45	00
H. L. Kinney,†	135	85	81	50
Harp,†	114		68	40
Indian,	73	42	44	05
Ioway,	143	85	86	31
Iberia,	136	58	81	94
Illinois, D	98	73	59	23
John Nelson,	156	03	93	61
John Hancock,	100		60	00
Junius, D	130		78	00
Juniata, D	110	66	66	39
Java,	103	32	61	99
Irwinton,	105		63	00
Independence,*	275	65	165	37
John Jay,*	140		84	00
Invincible,†	210		126	00
Jefferson,†	350		210	00
John Mills,†	223	45	134	07
Isabella,†	152	50	91	50
Irene,†	165	72	99	43
Itasca,†				
Kentuckian,	331	37	198	82
Kentucky,*	90	22	54	13
Kansas,†	111		66	60
Louisiana, D	306		183	60
Leonidas,	97	66	58	59
Lady Byron, D	90	02	54	00
Lamp Lighter,	180		108	
Lady Franklin, D	177	05	106	23
Lady Marshall,	99	09	59	43
Lady Scott,	58	92	35	35
Lady Madison,	113	13	67	87
Lancaster,	130	39	78	23
Logan,	70	83	42	49
La Fourche,	186	49	111	89
Laura,	52	50	31	50
Lewis Cass,	138	72	83	23
Le Flore,	106	63	63	97
Levant,*	270		162	
Lily,*	82	48	49	48
Loyal Anna,*	76	76	46	05
Le Roy,*	83	19	49	91
Lexington,*	230	64	138	37
Livingston,*	175	49	105	25
London,†	125	05	75	
Louisville,†	308		184	80

NAMES.	MEASUREMENT.		CANAL TOLL.	
	Tolls.	*95ths.*	*Dolls.*	*Cts.*
Liberty,†	83	53	50	11
Little Red,†	183		109	80
Laurel,† (U. S.)	100		60	
Little Rock,†	156	63	94	
Liverpool,†	51		30	60
Logansport,†	127		76	20
Mogul,	414	46	248	67
Michigan, D	338	47	203	08
Majestic,	323	31	193	98
Missourian,	245	70	147	42
Mississippi,	373	58	224	14
Madison,	322	35	193	41
Mountaineer,	162	54	97	52
Mt. Vernon,	86		51	60
Marion,	139	75	83	85
Metamora,	89	04	53	42
Minerva,	87	58	52	54
Miner,	57	25	34	35
Mazeppa,	114	40	68	64
Mt. Pleasant,	90	57	54	22
Medora,	210	54	126	32
Monroe,	88	75	53	25
Missouri Fulton,*	120		72	
Mississippian,*	198	53	119	11
Mediator,*	225		135	
Mobile,*	230	80	138	48
Monmouth,* S	135		81	
Motto,*	82	52	49	50
Mariner,*	98	82	59	29
Moravian,*	324	34	194	60
Masillon,†	96	14	57	62
Monarch,†	317	70	190	62
Marmora,† B	261		156	60
Marmion,†	204	45	122	62
Manchester,†	105	35	63	21
Maryland,†	121	25	72	75
Merrimack,†	244	70	146	82
North America,*	445	05	267	
North Alabama,	341	24	204	74
Nashville,	128	87	77	32
Navarino, D	147	75	88	65
New York,	105	35	63	21
Neosho,	88		52	80
Navigator,	69	45	41	67
Nimrod,	30		18	
Native, No. 1,	58	56	35	13
Nick Biddle,*	139	43	83	65
Newark,*	88	55	53	13

NAMES.	MEASUREMENT.		CANAL TOLL.	
	Tolls.	*5ths.*	*Dolls.*	*C's.*
Neptune,*	133	27	79	96
Niagara,*	125	20	75	12
Naples,†	160		96	
Native, No. 2,†				
North Star,†	157	45	94	47
New Albany,†	148	85	89	31
Orleans,	326	82	196	09
Ohio, D	273	47	164	08
O'Connell,	107	46	64	47
Olive Branch,	76	59	45	95
Osage, D	89	38	53	62
Ohioan, S	88	56	53	13
Orion,	65	69	39	41
Ophelia,	113	40	68	04
Oswego,	117	32	70	39
Otsego,	95	45	57	27
Oceana,*	285	73	171	43
Ontario,*	133	75	80	25
Othello,†				
Ozark,†	130		78	
Oronoko,† D	367	67	220	60
Philadelphia,	101		60	60
Powhatan, D	269	06	161	43
Paul Jones,	149	73	89	83
Pontchartrain,	132	40	79	44
Princeton,	125	05	75	03
Potosi, S	121	51	72	90
Planter, D	107	68	64	60
Privateer, S	146	15	87	69
Portsmouth, D	97	19	58	31
Plough Boy,	81	45	48	87
Persian,*	430	20	258	12
Prairie,*	296	72	173	79
Pittsburgh,*	144	87	86	92
Pavillion,*	83	45	50	
Patrick Henry,*	93		55	80
Post Boy,†	140		84	
Paris,†	131	25	78	75
Peru,†	291	67	175	00
Passenger,†	157	61	94	56
Pulaski,†	44	10	26	50
Pioneer,†	112	23	67	31
Pirate,†	128	27	76	96
Pearl,† (U. S.)	94		56	40
Palmyra,†	101	30	60	75
Pennsylvanian,†	134		80	40
Quincy,*	117	20	70	32
Rob Roy, B	192		115	20

NAMES.	MEASUREMENT.		CANAL TOLL.	
	Tolls.	*95ths.*	*Dolls.*	*Cts.*
Robt. Morris,	123	40	74	04
Rufus Putnam,	98		58	80
Revenue,	122	05	73	23
Rapide,	127	09	76	25
Reindeer,	104	39	62	63
Richmond,	32	88	19	72
Robt. Emmet,*	103	70	62	22
Rienzi,*	173	05	103	81
Rodolph,*	150	27	90	17
Rover,†	55	85	33	50
Reporter,†	134	86	80	92
Rochester,†	92	75	55	65
Rolla,†	139		83	40
Renown,†	163		97	80
Roanoke,†				
Reserve,†	115		69	00
Rodney,†	99	24	59	54
Splendid,	354	66	212	79
Shakspeare,	227	35	136	41
Samson, D	198	18	118	90
Scotland, D	158	22	94	93
Signal,	140	87	84	50
Science,	50	75	30	45
Statesman,	136	76	82	05
Shoal Water, D	99	03	59	41
Siam,	127	54	76	52
Star of the West,	125		75	00
Swiss Boy,	121	60	72	96
St. Lawrence,	111	36	66	81
South Alabama,	165	90	99	54
Souvenir,	88	66	53	29
Selma,*	355	30	213	18
St. Charles,*	127	82	76	69
Southerner,*	298	12	178	87
Salem,*	106	53	63	91
Savannah,*	137	54	82	52
St. Peters,*	119	35	71	61
Swan,*	112	55	67	53
Sun Flower,*	70	85	42	50
Superior,	201		120	60
Susquehanna,†	138	56	83	13
Smelter,†	180		108	00
Sandusky,†	111	60	66	96
Tuscarora,	286	86	172	11
Tuscahoma,	160	70	96	42
Tiskilwa,	88	25	52	95
Tuscumbia,	82	25	49	35
Tchula,	79	75	47	85

NAMES.	MEASUREMENT.		CANAL TOLL.	
	Tons.	*95ths.*	*Dolls.*	*Cts.*
Tempest,	105		63	00
Teche,	142	40	85	44
Tuskina,	256	66	153	99
Tecumseh,*	96	80	58	08
Troubadour,*	113	47	68	08
Tremont,*	112	80	67	68
Troy,*	120	30	72	18
Tuckahoe,*	80		48	00
Tobacco Plant, D				
Tennessee,†	86	58	51	94
Terre Haute,† 111-16			52	80
Triumph,†	68	20	40	92
Tarquin,†	165		99	00
Tanchipaho,†	65	40	39	25
Uncle Sam, D	447	26	268	35
Velocipede,	123	05	73	83
Vermont,*	158	76	95	25
Vicksburg,*	230		138	00
Visiter,†	100	19	60	12
Victor,†	90		54	00
Virginia,†	116	30	69	75
Victoria,†	85	56	51	33
Wm. Penn, D	84	06	50	43
Waterloo,	90	19	54	06
Wyoming, D	98	88	59	32
Wisconsin,	87	56	52	53
Washington,	139	78	83	86
Wheeling,	93	37	56	00
Wm. Wallace, D	60		36	00
Warren, No. 1,	290	50	174	30
Warren, No. 2,*	73	77	44	25
Walter Scott,	193	45	116	07
Warrior,	100	23	60	13
Wabash,*	43	91	26	34
Wave,*	75		48	00
Wm. Glasgow,†	249	34	149	60
Wilmington,†	206		123	60
Warsaw,	146	45	87	87
Wm. Wirt,†	110		66	00
Winchester,†	190		114	00
Wm. Wallace,†	160		96	00
Walk-in-the-Water,†	199	45	119	67
Yellow Stone,	144	08	86	44
Yalobusha,	80	53	48	31
Yazoo,	150		90	00

Abstract of the Boats that have passed and Tolls received on the Louisville and Portland Canal.

YEARS.	*Steamboats.*	*Flat & Keel Boats.*	*Tons.*	*Am't received.*
1831,	406	421	76,323	$12,750 77
1832,	453	179	70,109	25,756 12
1833,	875	710	169,885	60,736 92
1834,	938	623	162,000	61,848 17
1835,	1,256	355	200,413	80,165 24
1836,	1,182	260	182,220	88,343 23
1837,	1,501	165	242,374	145,424 69
	6,611	2,713	1,103,324	$475,025 14

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EXPLOSION OF THE STEAM BOAT MOSELLE.

The recent explosion of the steam boat Moselle, at Cincinnati, affords a most awful illustration of the danger of steam navigation, when conducted by ignorant or careless men; and fully sustains the remark made in the preceding pages, that "the accidents are almost wholly confined to insufficient or badly managed boats."

The Moselle was a new boat, intended to ply regularly between Cincinnati and St. Louis. She had made but two or three trips, but had already established a high reputation for speed; and as is usual in such cases, those by whom she was owned and commanded, became ambitious to have her rated as a "crack boat," and spared no pains to exalt her character. The newspapers noticed the *quick trips* of Moselle, and passengers chose to embark in this boat in preference to others. Her captain was an enterprising young man, without much experience, bent upon gaining for his boat, at all hazards, the distinction of being the fastest upon the river, and not fully aware, perhaps, of the inevitable danger which attended his rash experiment.

On Wednesday, the 25th of April, between 4 and 5 o'clock in the afternoon, this shocking catastrophe occurred. The boat was crowded with passengers; and as is usually the case on our western rivers, in regard to vessels passing westwardly, the largest proportion were emigrants. They were mostly deck-passengers, many of whom were poor Germans, ignorant of any language but their own, and the larger portion consisted of families, comprising persons of all ages. Although not a large boat, there were eighty-five passengers in the cabin, which was a much larger number than could be comfortably accommodated; the number of deck passengers is not exactly known, but as is estimated, at between one hundred and twenty and one hundred and fifty, and the officers and crew amounted to thirty—making in all about two hundred and sixty souls.

It was a pleasant afternoon, and the boat, with steam raised, delayed at the wharf, to increase the number—already too great —of her passengers, who continued to crowd in, singly, or in companies, all anxious to hurry onwards in the first boat, or eager to take passage in the *fast-running* Moselle. They were of all conditions—the military officer hastening to Florida to take command of his regiment—the merchant bound to St. Louis —the youth seeking out a field on which to commence the career of life—and the indigent emigrant with his wife and children, already exhausted in purse and spirits, but still pushing onward to the distant frontier.

On leaving the wharf, the boat ran up the river about a mile, to take in some families and freight, and having touched at the shore for that purpose, for a few minutes, was about to lay her course down the river. The spot at which she thus landed, was at a suburb of the city, called Fulton, and a number of persons had stopped to witness her departure, several of whom remarked from the peculiar sound of the steam, that it had been raised to an unusual height. The crowd thus attracted—the high repute of the Moselle—and certain vague rumours which began to circulate, that the captain had determined, at every risk, to beat another boat which had just departed—all these circumstances gave an unusual eclat to the departure of this ill-fated vessel.

The lading completed, the bow of the boat was shoved from the shore, when an explosion took place, by which the whole of the fore part of the vessel was literally blown up. The passengers were unhappily in the most exposed positions—on the deck, and particularly on the forward part, sharing the excitement of the spectators on shore, and anticipating the pleasure of darting rapidly past the city in the swift Moselle. The power of the explosion was unprecedented in the history of steam: its effect was like that of a mine of gunpowder. All the boilers, four in number, were simultaneously burst, the deck was blown into the air, and the human beings who crowded it hurried into instant destruction. Fragments of the boilers, and of human bodies, were thrown both to the Kentucky and the Ohio shore, and as the boat lay near the latter, some of these helpless victims must have been thrown a quarter of a mile. The body of Captain Perrin, the master, was found dreadfully mangled, on the nearest shore. A man was hurled with such force, that his head with half his body, penetrated the roof of a house, distant more than a hundred yards from the boat. Of the number who had crowded this beautiful boat, a few minutes before, nearly all were hurled into the air, or plunged into the water. A few, in the after part of the vessel, who were uninjured by the explosion, jumped overboard. An eye witness says, that he saw sixty or seventy in the water at one time, of whom not a dozen reached the shore.

The news of this awful catastrophe spread rapidly through the city, thousands rushed to the spot, and the most benevolent aid was promptly extended to the sufferers—to such, we should rather say, as were within the reach of human assistance—for the majority had perished.

The writer was among those who hastened to the neighbourhood of the wreck, and witnessed a scene so sad, that no language can depict it with fidelity. On the shore lay twenty or thirty mangled, and still bleeding corpses, while others were in the act of being dragged from the wreck or the water. There were men carrying away the wounded, and others gathering the trunks, and articles of wearing apparel that strewed the beach.

The survivors of this awful tragedy, presented the most touching objects of distress. Death had torn asunder the most tender ties; but the rupture had been so sudden and violent, as yet none knew certainly who had been taken, nor who had been spared. Fathers were inquiring for children, children for parents, husbands and wives, for each other. One man had saved a son, but lost a wife and five children. A father, partially deranged, lay with a wounded child on one side, a dead daughter on the other, and his wife, wounded, at his feet. One gentleman sought his wife and children, who were as eagerly seeking him in the same crowd—they met, and were re-united.

A female deck passenger, that had been saved, seemed inconsolable for the loss of her relations. To every question put to her, she would exclaim, "Oh my father! my mother! my sisters!" A little boy, about four or five years of age, whose head was much bruised, appeared to be regardless of his wounds, but cried continually for a lost father, while another lad, a little older, was weeping for his whole family.

One venerable looking man wept a wife and five children; another was bereft of nine members of his family. A touching display of maternal affection was evinced by a lady who on being brought to the shore, clasped her hands and exclaimed, "Thank God, I am safe!" but instantly recollected herself, ejaculated in a voice of piercing agony, "where is my child!" The infant, which had been saved, was brought to her, and she fainted at the sight of it.

A public meeting was called in Cincinnati, at which the Mayor presided, when the facts of this melancholy occurrence were discussed, and among other resolutions passed, was one deprecating "the great and increasing carelessness in the navigation of steam vessels," and urging this subject upon the consideration of Congress. No one denied that this sad event, which had filled our city with consternation, sympathy and sorrow, was the result of a reckless and criminal inattention to their duty, on the part of those having the care of the Moselle, nor did any one attempt to palliate their conduct. Committees were appointed to seek out the sufferers, and perform the various duties which humanity dictated. Through the exertions of the gentlemen appointed on this occasion, lists were obtained and published, showing the names of the passengers as far as could be obtained, and giving the following result :—

Killed, - - - - - -	81
Badly wounded, - - - -	13
Missing, - - - - - -	55
Saved, - - - - - -	117
	266

As many strangers entered the boat but a few minutes before its departure, whose names were not registered, it is probable that the whole number of souls on board was not less than *two hundred and eighty*. Of the missing, many dead bodies have since been found, but very few have been added to the list of *saved*. The actual number of lives lost, therefore, does not vary much from *one hundred and fifty*.

Scarcely had our community time to realize the horrors of this explosion, when we received the intelligence of another, of which we subjoin the newspaper account.

EXPLOSION OF THE STEAMBOAT ORONOKO.

On Saturday morning, the "Oronoko," of Pittsburgh, on her way from New Orleans, collapsed a flue opposite Princeton, about one hundred miles above this place, blowing all between the boiler and the stern of the boat literally into the river. The deck was crowded with passengers, estimated at one hundred, and but few are left surviving. She was towed to this place on Saturday night, with about thirty-five of the wretched sufferers, some dead, some lingering in the torments of death, and a few who will recover.

As soon as she arrived, most of the medical gentlemen of the city, with numbers of our active and benevolent citizens, repaired to the boat and extended every relief that science and humanity could afford to the sufferers.

The cabin-floor presented the most heart-rending scene we ever witnessed. Some were literally parboiled and writhing in the agonies of death, the skin had dropped from the flesh of others, and life was ebbing in some from inhaling steam, though exhibiting but slight evidence of external injury. The groans of some, the silent agony of others, the fortitude and firmness with which many approached the brink of eternity, presented a scene of horror and distress, most shocking to behold.

Of those who were brought here, eighteen or nineteen were buried yesterday. They were decently interred, and followed to the grave by a large concourse of our citizens. Thirteen were alive last night; but several of these cannot possibly survive.

We have been unable to obtain the names of those who were blown overboard, as well as most of those who were buried here yesterday. They were all steerage passengers, and many of them went on board at this place, so that the clerk could not give us their names. The engineer of the boat, John Porter, Edward Stowrs, an Englishman, Mrs. Flanigan and her two children, who started from this place in the Oronoko, were among the buried yesterday. Mr. Flanigan will recover from his injury.

We have understood that seven or eight of those left at Princeton have since died.

Col. Oliver lost seven or eight of his servants, and remained at Princeton taking care of two or three of his boys that are badly scalded, and who are not expected to survive. His celebrated race horse, Joe Kearney, was scalded and died; one other severely injured.

The cabin was as crowded as the steerage, and had the explosion taken place at breakfast nearly all must have perished.

Mr. Myers, who was steward last year at the Pinckard House, and his child, are thought to be the only cabin passengers seriously injured. He also would have escaped injury, but when the explosion took place he rushed from his state-room into the cabin with his child in his arms, and both were scalded; his wife remained in her room and escaped. They remain at Princeton.

The "Oronoko" is a new boat, and one of the largest on the river. It is a most fortunate circumstance that the accident occurred about daylight, and that the boat's berths are all state rooms. Nearly all were in bed, and none but those who opened their doors and rushed out, suffered any injury.

Such was the tremendous force of the explosion, that the box of the fly wheel, with a portion of the cabin's floor were bursted open, filling the gentlemen's cabin with steam.

This awful catastrophe will teach one salutary lesson on steamboat travelling—the security afforded by well constructed state rooms. Those of the "Oronoko" were properly ventilated above, and before the steam had entirely consumed the atmosphere, there was sufficient time for the boat to move out into fresh air. A gentleman and his family in the ladies' cabin, resisted all attempts to burst open his door, until the steam had disappeared. He with great presence of mind and judgment, applied his hand repeatedly to the aperture for ventilating his room, but finding the hot steam rushing in, he declined opening his door. The upper layers of atmosphere were soon consumed, and they had to recline on the floor in order to obtain air fit for respiration.

There is, we believe, no blame attached to Captain Crawford, the commander of the boat. He was on the hurricane-deck in the discharge of his duty, sending out the yawl for passengers, and the boat had been *lying-to* about five minutes. When she was getting under way, at the third stroke of the engine, the explosion took place. Porter, the engineer, survived a short time, perhaps an hour, and declared that he had considered the condition of the boat perfectly safe—both as regards the water and steam. The boilers were some six or seven years old, having been taken out of the old Michigan, and Porter must have been deceived in the amount of steam or the strength of the boilers—the latter however, we understand, afforded no evidence of the deficiency.

There is a discrepancy between the statements of some of the officers and a gentleman who was on the bank of the river at the time. The latter says that he thinks no steam escaped during the time the boat *lay-to*, while some of the officers are of a different opinion.

A great many were blown overboard and lost. The number of lives lost is between fifty and one hundred.—*Vicksburg Sentinel.*